# **SERVICE MANUAL**



<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST</u>	CHASSIS NO.
KV-27V42	RM-Y165	US	SCC-S27M-A
KV-27V66	RM-Y167	US	SCC-S27J-A
KV-27V66	RM-Y167	CND	SCC-S28H-A
KV-29SL42K	RM-Y149A	KOREA	SCC-S29A-A
KV-29SL42T	RM-Y165	TAIWAN	SCC-S30A-A
KV-29VL42T	RM-Y165	TAIWAN	SCC-S30B-A
KV-29XL42T	RM-Y165	TAIWAN	SCC-S30C-A





KV-29SL42K

RM-Y149A



TRINITRON® COLOR TV SONY®

# **SPECIFICATIONS**

	KV-27V42, KV-29SL42T	KV-27V66	KV-29SL42K	KV-29VL42T, KV-29XL42T
Power Requirements	120V, 60Hz	120V, 60Hz	AUTO VOLT 120-220V, 50-60Hz	120V, 60Hz
Number of inputs/outputs				
Video <sup>1)</sup>	3	3	2	2
S-Video Input <sup>2)</sup>	1	1	1	1
Audio Input <sup>3)</sup>	3	3	2	2
Audio Out <sup>4)</sup>	1	1	1	1
Speaker Output (W)	5WX2	10WX2	5WX2	5WX2
Power Consumption (W)				
In Use (Max)	140W	180W	140W	140W
In Standby	2W	2W	2W	2W
Dimensions (W/H/D)				
(mm)	690 x 575.4 x 503.4 mm			
(in)	27 <sup>1</sup> / <sub>4</sub> x 22 <sup>3</sup> / <sub>4</sub> x 19 <sup>7</sup> / <sub>8</sub> in.	27 <sup>1</sup> / <sub>4</sub> x 22 <sup>3</sup> / <sub>4</sub> x 19 <sup>7</sup> / <sub>8</sub> in.	27 <sup>1</sup> / <sub>4</sub> x 22 <sup>3</sup> / <sub>4</sub> x 19 <sup>7</sup> / <sub>8</sub> in.	27 <sup>1</sup> / <sub>4</sub> x 22 <sup>3</sup> / <sub>4</sub> x 19 <sup>7</sup> / <sub>8</sub> in.
Mass				
(kg)	42.4 kg	42.4 kg	42.4 kg	42.4 kg
(lbs)	93 lbs. 8oz	93 lbs. 8oz	93 lbs. 8oz	93 lbs. 8oz

#### **Television system**

American TV standard/NTSC

# **Picture Tube**

Trinitron® tube

#### Channel coverage

VHF:2-13/UHF:14-69/CATV:1-125

#### Visible screen size

27" picture measured diagonally

#### Actual screen size

29" picture measured diagonally

#### Antenna

75 ohm external terminal for VHF/UHF

#### **Supplied Accessories**

Remote Commander (RM-Y165) (KV-27V42/29SL42T/29VL42T/29XL42T)

Remote Commander (RM-Y167) (KV-27V66)

Remote Commander (RM-Y149A) (KV-29SL42K)

Size AA (R6) batteries (2)

#### **Optional Accessories**

Dipole antenna Connecting cables VMC-810S/820S, VMC-720M, YC-15V/30V, RK74A U/V mixer EAC-66

## Design and specifications are subject to change without notice.

1) 1 Vp-p 75 ohms unbalanced, sync negative

## (●) SRS (SOUND RETRIEVAL SYSTEM)

The ( ) SRS (SOUND RETRIEVAL SYSTEM) is manufactured by Sony Corporation under license from SRS Labs, Inc. It is covered by U.S. Patent No. 4,748,669. Other U.S. and foreign patents pending.

The word 'SRS' and the SRS symbol ( ) are registered trademarks of SRS Labs, Inc.

BBE and BBE symbol are trademarks of BBE Sound, Inc. and are licensed by BBE Sound, Inc. under U.S. Patent No. 4,638,258 and 4,482,866.

<sup>&</sup>lt;sup>2)</sup> Y: 1Vp-p 75 ohms unbalanced, sync negative. C: 0.286 Vp-p (Burst signal), 75 ohms

<sup>3) 500</sup>mVrms (100% modulation), impedance:47 kilohms

<sup>&</sup>lt;sup>4)</sup> More than 408 mVrms at the maximum volume setting (variable) More than 408 mVrms (fix), Impedance: 5 kilohms

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# WARNINGS AND CAUTIONS

#### CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

#### WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

#### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  $\triangle$  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS, AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

#### ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

#### ATTENTION!!

AFIN D'EVITER TOUT RESQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

#### ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

LES COMPOSANTS IDENTIFIES PAR UNE TRAME ET PAR UNE MARQUE \( \triangle \) SUR LES SCHEMAS DE PRINCIPE, LES VUES EXPLOSEES ET LES LISTES DE PIECES SONT D'UNEIMPORTANCE CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMERO DE PIECE EST INDIQUE DANS LE PRESENT MANUEL OU DANS DES SUPPLEMENTS PUBLIES PAR SONY. LES REGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRESENT MANUEL. SUIVRE CES PROCEDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONTIONNEMENT SUSPECTE.

#### SELF-DIAGNOSTIC FUNCTION

The units in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER LED will automatically begin to flash. The number of times the LED flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER LED flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the Remote Commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

#### **Diagnostic Test Indicators**

When an error occurs, the STANDBY/TIMER LED will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the LED will identify the first of the problem areas.

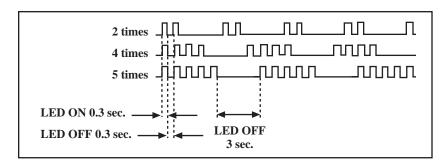
Results for all of the following diagnostic items are displayed on screen. No error has occurred if the screen displays a "0".

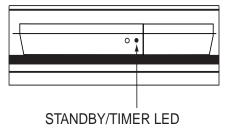
Diagnostic Item Description	No. of Times STANDBY/TIMER LED Flashes	Self-diagnostic Display/ Diagnostic Result	Probable Cause Location	Detected Symptoms		
Power does not turn on	Does not light		Power cord is not plugged in.     Fuse F5050 is burned out (E board).	<ul><li>Power does not come on.</li><li>No power is supplied to the TV.</li><li>AC power supply is faulty.</li></ul>		
+B overcurrent (OCP)*	2 times	2:0 or 2:1	H.OUT (Q502) is shorted (A Board)     IC1751 (C board) or IC 1701(CV Board) are shorted.	Power does not come on. Load on power line is shorted.		
Vertical deflection stopped*	4 times	4:0 or 4:1	+13V is not supplied. (A Board)     IC541 is faulty. (A Board)	<ul> <li>Has entered standby state after horizontal raster.</li> <li>Vertical deflection pulse is stopped.</li> <li>Power line is shorted or power supply is stopped.</li> </ul>		
White balance failure (not balanced)	5 times	5:0 or 5:1	Video OUT (Q306 to 308) is faulty. (A Board) IC301 is faulty. (A Board) Screen (G2) is improperly adjusted.**	No raster is generated.     CRT cathode current detection reference pulse output is small.		

<sup>\*</sup> If a +B overcurrent is detected, stoppage of the vertical deflection is detected simultaneously. The symptom that is diagnosed first by the microcontroller is displayed on the screen.

<sup>\*\*</sup> Refer to Screen (G2) Adjustments in Section 3-4 of this manual.

# Display of Standby/Timer LED Flash Count





Diagnostic Item	Flash Count*
+B overcurrent	2 times
Vertical deflection stopped	4 times
White balance failure	5 times

<sup>\*</sup>One flash count is not used for self-diagnostic.

# Stopping the Standby/Timer LED Flash

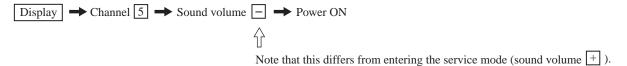
Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY/TIMER LED from flashing.

# Self-Diagnostic Screen Display

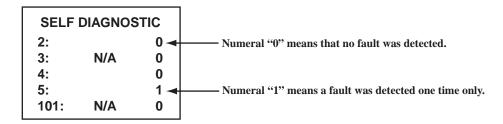
For errors with symptoms such as "power sometimes shuts off" or "screen sometimes goes out" that cannot be confirmed, it is possible to bring up past occurrences of failure on the screen for confirmation.

# To Bring Up Screen Test

In standby mode, press buttons on the Remote Commander sequentially, in rapid succession, as shown below:



#### **Self Diagnostic Screen Display**



# Handling of Self-diagnostic Screen Display

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen during repairs. When you have completed the repairs, clear the result display to "0".

Unless the result display is cleared to "0", the self-diagnostic function will not be able to detect subsequent faults after completion of the repairs.

#### Clearing the Result Display

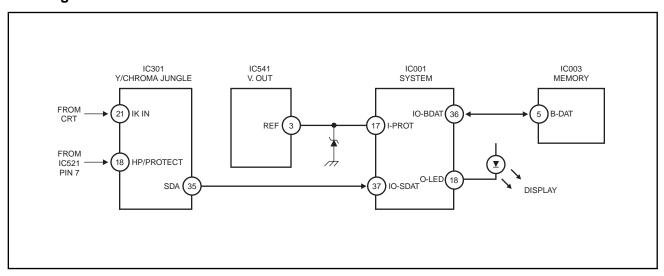
To clear the result display to "0", press buttons on the Remote Commander sequentially when the diagnostic screen is displayed, as shown below:

Channel 8 → ENTER

#### **Quitting the Self-Diagnostic Screen**

To quit the entire self-diagnostic screen, turn off the power switch on the Remote Commander or the main unit.

# **Self-diagnostic Circuit**



**+B overcurrent (OCP)** Occurs when an overcurrent on the +B (115V) line is detected by pin 18 of IC301. If the voltage

of pin 18 of IC301 is less than 1V when V.SYNC is more than seven verticals in a period, the

unit will automatically turn off.

Vertical deflection stopped Occurs when an absence of the vertical deflection pulse is detected by pin 17 of IC001. Power

supply will shut down when waveform interval exceeds 2 seconds.

detected by IC301. TV will stay on, but there will be no picture.

\*(Refers to the RGB levels of the AKB detection Ref pulse that detects 1K.)

# **SAFETY CHECK-OUT**

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

- Check the area of your repair for unsoldered or poorly soldered connections. Check the entire board surface for solder splashes and bridges.
- 2. Check the interboard wiring to ensure that no wires are "pinched" or touching high-wattage resistors.
- Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced.
   Be absolutely certain that you have replaced all the insulators.
- Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
- Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
- Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
- Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
- Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

## **Leakage Test**

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampere). Leakage current can be measured by any one of three methods.

- A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instructions.
- A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
- 3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low voltage scale. The Simpson's 250 and Sanwa SH-63Trd are examples of passive VOMs that are suitable. Nearly all battery-operated digital multimeters that have a 2 VAC range are suitable (see Figure A).

#### How to Find a Good Earth Ground

A cold-water pipe is a guaranteed earth ground; the coverplate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60- to 100-watt trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side on the line; the lamp should light at normal brilliance if the screw is at ground potential (see Figure B).

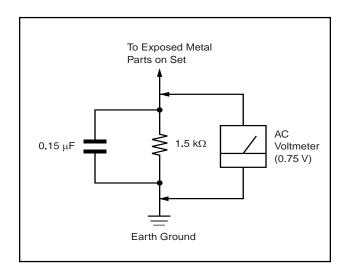


Figure A. Using an AC voltmeter to check AC leakage.

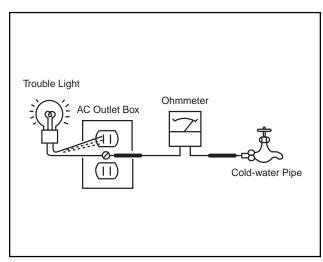


Figure B. Checking for earth ground.

# **SECTION 1 GENERAL**

The following are partial abstracts from the Operating Instruction Manual. The page numbers shown reflect those of the Operating Instruction Manual.

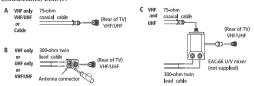
# **Connecting Your TV**

This section covers basic connections in addition to any optional equipment you may be connecting.

#### **Basic Connections**

#### TV with indoor or outdoor antenna, or CATV cable

Depending on the cable available in your home, choose one of the connections below:



A If you are connecting to an indoor or outdoor antenna, it will be necessary to adjust the orientation of the antenna for best reception

#### Cable and antenna

KV-27S66, 27V66 only

If your cable provider does not feature local channels, you may find this set up convenient.

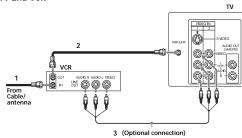


Select CABLE or ANT mode by pressing and on the remote control.

#### User Guide

#### **Connecting Additional Equipment**

TV and VCR



- ! VCR must be connected and turned on to operate PIP. (KV-27S46 only)
- Connect the coaxial cable from your TV antenna or cable TV to the IN jack on your VCR.
- Connect a coaxial cable (not supplied) from the OUT jack on your VCR to the VHF/UHF IN jack on the TV.
- To watch video programs from your VCR, tune your TV to channel 3 or 4 (as set on the rear of your VCR).

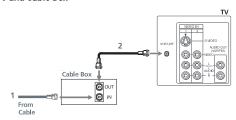
#### (Optional connection)

- 3 If your VCR is equipped with video inputs, for better picture quality you should connect A/V cables to AUDIO and VIDEO OUT on your VCR to AUDIO/VIDEO IN on your TV. You can use the TVMDEO button to switch between the TV and VCR inputs.
- For optimum picture quality, use S VIDEO instead of the yellow A/V cable. S VIDEO does not provide sound, the audio cables must still be connected.

#### Connecting Your TV

3

#### TV and Cable Box

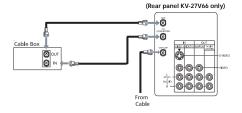


- Connect the coaxial cable from the wall to the IN jack on your cable
- Connect a coaxial cable (not supplied) from the OUT jack on your cable box to the VHF/UHF IN jack on the TV.
- ☼ To view channels from your cable box, tune your TV to channel 3 or 4 (as set on the rear panel of your cable box)
- If you will be controlling all channel selection through your cable box, you should consider using the CHANNEL FIX feature on page 24.

#### User Guide

#### TV. Cable box and Cable KV-27S66, 27V66 only

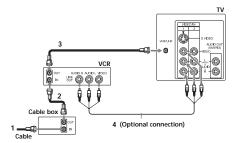
For this set up, you can switch between scrambled channels (through your cable box), and normal (CATV) channels by pressing  $\stackrel{MI}{=}$  on your remote control.



When using PIP, the AUX input cannot be viewed in the window picture.

#### Connecting Your TV

#### TV, VCR, and Cable box



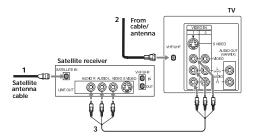
- Connect the coaxial cable from the wall to the IN jack on your cable box.
- **2** Connect a coaxial cable (not supplied) from the OUT jack on your cable box to the IN jack on your VCR.
- 3 Connect a coaxial cable (not supplied) from the OUT jack on your VCR to the VHF/UHF IN jack on the TV.
- If you will be controlling all channel selection through your cable box, you should consider using the CHANNEL FIX feature on page 24.

#### (Optional connection)

- 4 If your VCR is equipped with video inputs, for better picture quality you should connect A/V cables to AUDIO and VIDEO OUT on your VCR to AUDIO/VIDEO IN on your TV. You can use the button to switch between the TV and VCR inputs.
- For optimum picture quality, use S VIDEO instead of the yellow A/V cable. S VIDEO does not provide sound, the audio cables must still be connected.

#### User Guide

#### TV and Digital Satellite Receiver



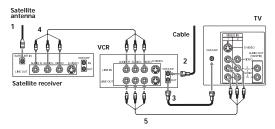
- Connect the cable from your satellite antenna to SATELLITE IN on the satellite receiver.
- **2** Attach the coaxial connector from your cable or antenna to VHF/UHF IN on your TV.
- 3 Using A/V connectors, connect AUDIO and VIDEO OUT on your satellite receiver to AUDIO and VIDEO IN on your TV. You can use the TV. White out to switch between the satellite receiver and the TV.
- For optimum picture quality, use S VIDEO instead of the yellow A/V cable. S VIDEO does not provide sound, your audio connectors must still be connected.

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# Connecting Your TV

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#### TV, Digital Satellite Receiver and VCR

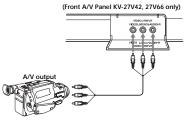


- Connect the cable from your satellite antenna to SATELLITE IN on the satellite receiver.
- ${\bf 2}$  Attach the coaxial connector from your cable or antenna to VHF/UHF IN on your VCR.
- **3** Using a coaxial cable, connect VHF/UHF OUT on your VCR to VHF/UHF IN on your TV.
- 4 Using A/V connectors, connect AUDIO and VIDEO OUT on your satellite receiver to AUDIO and VIDEO IN on your VCR.
- 5 Using A/V connectors, connect AUDIO and VIDEO OUT on your VCR to AUDIO and VIDEO IN on your TV.
- To view from the satellite or VCR, select the video input to which your satellite receiver or VCR is connected by pressing TWYDEO on the remote

# User Guide

#### Connecting a Camcorder

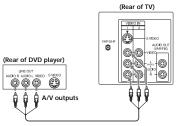
Using A/V cables, connect AUDIO and VIDEO OUT on your camcorder to AUDIO and VIDEO IN on your TV.



Connection can also be made to the rear A/V panel of your TV.

## Connecting a DVD Player

Using A/V connectors, connect LINE OUT on your DVD to VIDEO IN on your TV.



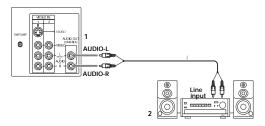
For optimum picture quality, use S VIDEO instead of the yellow A/V cable. S VIDEO does not provide sound, your audio connectors must still be connected.

9

#### Connecting Your TV

#### Connecting an audio system

Using audio connectors, connect AUDIO OUT on your TV to one of the unused line inputs (e.g. TV, AUX, TAPE 2) on your stereo.



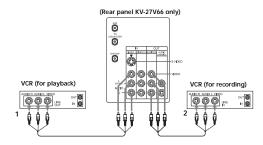
Set your stereo to the chosen line input. (See page 20 for additional audio setup instructions.)

#### User Guide

# Connecting two VCRs for Tape Editing

KV-27V42, 27V66 only

MONITOR OUT gives you the ability to use a second VCR to record a program being played by the primary VCR to perform tape editing.



- $\boldsymbol{1}$  . Connect the VCR intended for playback using the setup instructions on page 4 of this manual.
- 2 Using A/V connectors, connect AUDIO and VIDEO IN on your VCR intended for recording to MONITOR AUDIO and VIDEO OUT on your TV.
- ightharpoonup To perform tape editing: set the TV to the video input intended for playback by pressing  $ightharpoonup^{\text{TVMEO}}$  on the remote control.

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# User Guide

### **Troubleshooting**

If you are having a problem with your TV, try the suggestions below. If the problem persists, contact your nearest Sony dealer.

Cannot operate	Make sure the VCR is connected correctly (see page 4).
single tuner PIP (KV-27S46)	Check to see if the VCR is on.
PIP (KV-2/540)	Make sure your remote control is programmed to operate your VCR (see page 31).
No picture, no	Make sure the power cord is plugged in.
sound	If a red light is flashing on the front of your TV for more than a few minutes, call your local service center.
	Check the TV/VIDEO settings: when watching TV, set to TV; when watching video equipment, set to VIDEO (page 19).
	Make sure the batteries have been inserted correctly into the remote control.
	Check your PARENTAL CONTROL settings (pages 28-29).
	Try another channel, it could be station trouble.
Poor or no	Adjust PICTURE in the VIDEO menu (page 19).
picture, good	Adjust BRIGHTNESS in the VIDEO menu (page 19).
sound	Check the antenna and/or cable connections (page 3).
Good picture, no sound	Press MUTING disappears from the screen (page 13).
	Check your AUDIO settings. Your TV may be set to SAP (page 21).
No color	Adjust COLOR in the VIDEO menu (page 19).
Only snow	Check the CABLE setting in the CHANNEL SET UP
appears on the	menu (page 24).
screen	Check the antenna and/or cable connections (page 3).
	Make sure the channel selected is currently
	broadcasting.
	Press the button on the remote control.

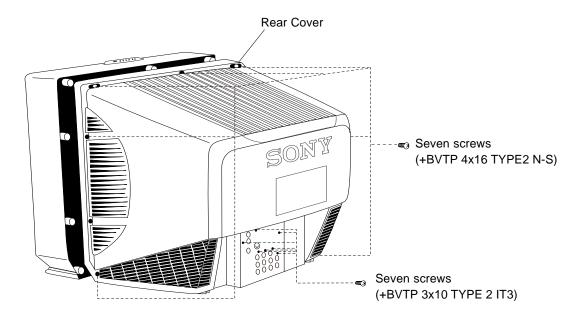
Other Information

Dotted lines or	Adjust the antenna.
stripes	Move the TV away from other electronic equipment.
	Some electronic equipment can create electrical noise, which can interfere with TV reception.
Double images or ghosts	Check your outdoor antenna or call your cable service.
Cannot receive higher number	Make sure CABLE is set to OFF in the CHANNEL SET UP menu (page 24).
channels (UHF) when using an antenna	Use AUTO PROGRAM to add channels that are not presently in the memory (page 24).
Cable stations don't seem to	Make sure CABLE is set to ON in the CHANNEL SET UP menu (page 24).
work	Use AUTO PROGRAM to add channels that are not presently in the memory (page 24).
Remote	Batteries could be weak. Replace them (page 2).
Control does not operate	Move the TV 3-4 feet away from fluorescent lights.
The TV needs to be cleaned	Clean the TV with a soft dry cloth. Never use strong solvents such as thinner or benzine, which might damage the finish of the cabinet.
Lost password for PARENTAL CONTROL	In the password screen, enter the following master password: 4357. After using the master password, you must create a new password, it cannot be used to unlock currently blocked channels.

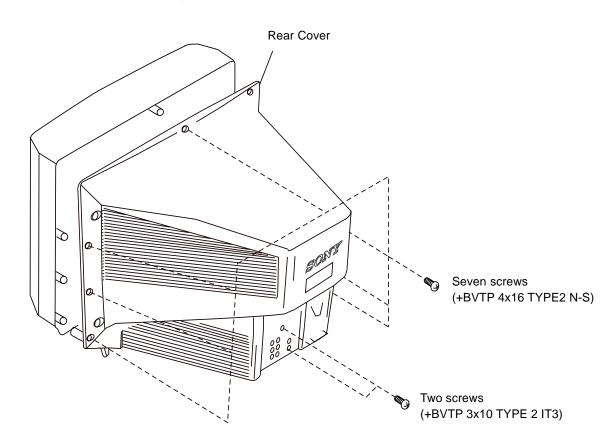
If, after reading these operating instructions, you have additional questions related to the use of your Sony television, please call our Direct Response Center at 1-800-222-SONY (7669) (U.S. residents only) or (416) 499-SONY (7669) (Canadian residents only).

# SECTION 2 DISASSEMBLY

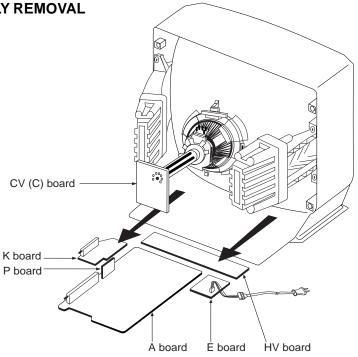
# 2-1. REAR COVER REMOVAL (KV-27V42/66/29VL42T)



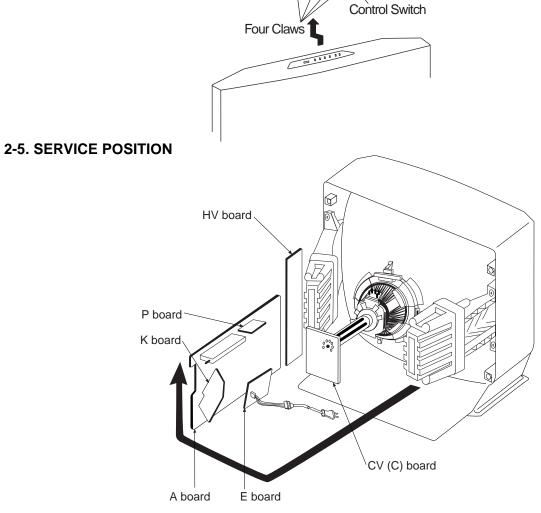
# 2-2. REAR COVER REMOVAL (KV-29SL42K/42T/29XL42T)



# 2-3. CHASSIS ASSEMBLY REMOVAL



# 2-4. CONTROL SWITCH REMOVAL (KV-27V42/66/29VL42T)

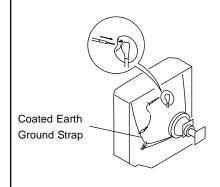


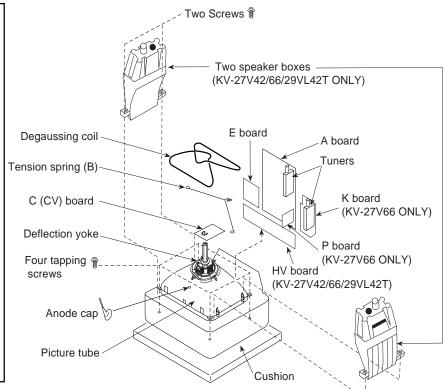
#### 2-6. PICTURE TUBE REMOVAL

# WARNING: BEFORE REMOVING THE ANODE CAP

High voltage remains in the CRT even after the power is disconnected.

To avoid electric shock, discharge CRT *before* attempting to remove the anode cap. Short between anode and CRT coated earth ground strap.



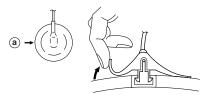


## ANODE CAP REMOVAL

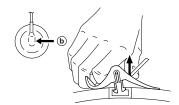
WARNING: High voltage remains in the CRT even after the power is disconnected. To avoid electrical shock, discharge the CRT **before** attempting to remove the anode cap. Short between anode and coated earth ground strap of CRT.

NOTE: After removing the anode, short circuit the anode of the picture tube and the anode cap to either the metal chassis, CRT shield, or carbon painted on the CRT.

# REMOVAL PROCEDURES



1 Turn up one side of the rubber cap in the direction indicated by arrow (a).



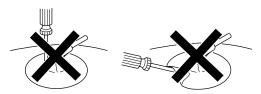
② Use your thumb to pull the rubber cap firmly in the direction indicated by arrow (b).



When one side of the rubber cap separates from the anode button, the anode cap can be removed by turning the rubber cap and pulling it in the direction of arrow (c).

#### **HOW TO HANDLE AN ANODE CAP**

- ① Do not use sharp objects which may cause damage to the surface of the anode cap.
- ② To avoid damaging the anode cap, do not squeeze the rubber covering too hard. A material fitting called a shatter-hook terminal is built into the rubber.
- ③ Do not force turn the foot of the rubber cover. This may cause the shatter-hook terminal to protrude and damage the rubber.



# SECTION 3 SET-UP ADJUSTMENTS

The following adjustments should be made when a complete realignment is required or when a new picture tube is installed.

These adjustments should be performed with rated power supply voltage unless otherwise noted.

Set the controls and switch as follows unless otherwise noted.

PICTURE control ...... Normal BRIGHTNESS control ...... Normal

Perform the adjustments in order as follows:

- 1. Beam Landing
- 2. Convergence
- 3. Focus
- 4. Screen (G2)
- 5. White Balance

Note: Test equipment required:

- Color bar pattern generator
- Degausser
- · DC power supply
- · Digital multimeter

#### 3-1. BEAM LANDING

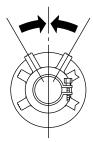
Before beginning adjustment procedure:

- 1. Degauss the entire screen.
- 2. Feed in the white pattern signal.

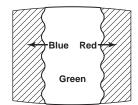
# **Adjustment Procedure**

- 1. Input a raster signal with the pattern generator.
- 2. Loosen the deflection yoke mounting screw and set the purity control to the center as shown below.

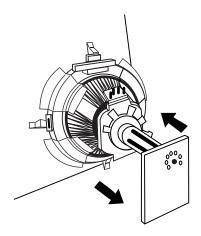
**Purity Control** 



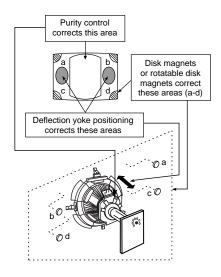
- 3. Turn the raster signal of the pattern generator to green.
- Move the deflection yoke backward and adjust the purity control so that green is in the center and red and blue are at the sides evenly.



5. Move the deflection yoke forward and adjust so that the entire screen becomes green.



- Switch over the raster signal to red and blue then confirm the condition.
- 7. When the position of the deflection yoke is determined, tighten it with the deflection yoke mounting screw.
- 8. If landing at the corner is not right, adjust by using the disk magnets.



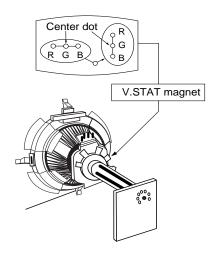
#### 3-2. CONVERGENCE

Before starting convergence adjustments:

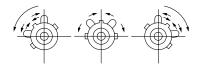
- 1. Perform FOCUS, V.LIN AND V.SIZE adjustments.
- 2. Set BRIGHTNESS control to minimum.
- 3. Feed in dot pattern.

## **Vertical Static Convergence**

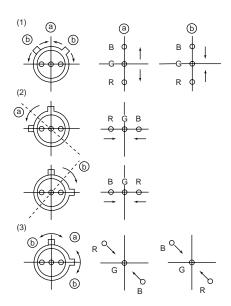
1. Adjust V.STAT magnet to converge red, green and blue dots in the center of the screen (vertical movement).



2. Tilt the V.STAT magnet and adjust static convergence to open or close the V.STAT magnet.

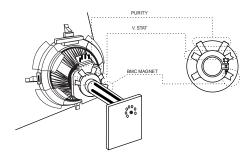


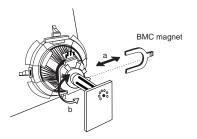
When the V.STAT magnet is moved in the direction of arrows (a) and (b), red, green, and blue dots move as shown below:



If the blue dot does not converge with the red and green dots, perform the following:

- 1. Move BMC magnet (a) to correct insufficient H. Static convergence.
- 2. Rotate BMC magnet (b) to correct insufficient V. Static convergence.
- 3. In either case, repeat Beam Landing Adjustment.

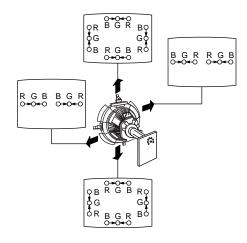




# **Dynamic Convergence Adjustment**

Before performing this adjustment, perform Horizontal and Vertical Static Convergence Adjustment.

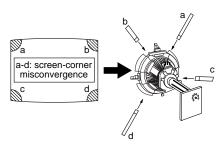
- 1. Slightly loosen deflection yoke screw.
- 2. Remove deflection yoke spacers.
- 3. Move the deflection yoke for best convergence, as shown below:



- 4. Tighten the deflection yoke screw.
- 5. Install the deflection yoke spacers.

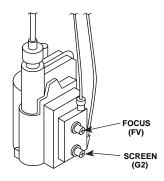
# **Screen-Corner Convergence**

1. Affix a permalloy assembly corresponding to the misconverged areas.



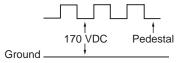
# **3-3. FOCUS**

1. Adjust FOCUS control for best picture.



# 3-4. SCREEN (G2)

- 1. Input a dots pattern.
- 2. Set the PICTURE and BRIGHTNESS controls at minimum and COLOR control at normal.
- 3. Adjust SBRT, GCUT, BCUT in service mode with an oscilloscope as shown below so that voltages on the red, green, and blue cathodes are 170 VDC.



4. Observe the screen and adjust SCREEN (G2) VR on the FBT to obtain the faintly visible background of dot signal.

# 3-5. METHOD OF SETTING THE SERVICE ADJUSTMENT MODE

#### Service Mode Procedure

- 1. Standby mode (power off).
- Display → Channel 5 → Sound volume + → Power ON on the Remote Commander (press each button within a second).

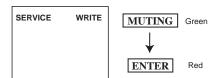
# **Activating Service Adjustment Mode**

1. The CRT displays the item being adjusted.



- 2. Press 1 or 4 on the Remote Commander to select the item.
- 3. Press 3 or 6 on the Remote Commander to change the
- 4. Press MUTING then ENTER to save into the memory.

## **Service Adjustment Mode Memory**



Turn set off then on to exit service adjustment mode.

#### 3-6. WHITE BALANCE ADJUSTMENTS

- 1. Input an entire white signal.
- 2. Set to Service Adjustment Mode.
- 3. Set DCOL to "0".
- 4. Set the PICTURE and BRIGHTNESS to minimum.
- 5. Adjust with SBRT if necessary.
- 6. Select GCUT and BCUT with 1 and 4.
- 7. Adjust with 3 and 6 for the best white balance.
- 8. Set PICTURE and BRIGHTNESS to maximum.
- 9. Select GDRV and BDRV with 1 and 4.
- 10. Adjust with 3 and 6 for the best white balance.
- 11. Reset DCOL to "1".
- 12. To write into memory, press MUTING then ENTER.

# SECTION 4 SAFETY RELATED ADJUSTMENTS

# 4-1. ► R584 CONFIRMATION METHOD (HV HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components which are marked with  $\square$  on the schematic diagram.

DY, C511, C573, C574, C575, D572, D573, D574, R582, R583, R585, R586, R578, R625, R626, T504, IC301, IC521, IC602, C507, C508, C505, C509, C515, C520, L591, L501

# **Preparation Before Confirmation**

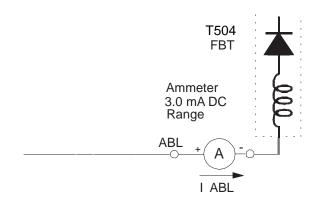
- Using a Variac, apply AC input voltage: 120 ± 2 VAC (or 120-220 ± 2 VAC for KV-29SL42K).
- 2. Turn the POWER switch ON.
- Input an entirely white signal and set the PICTURE and BRIGHTNESS controls to maximum.
- 4. Confirm that the voltage between C574 (+) or TP503 and ground is more than 105 VDC.

# **Hold-down Operation Confirmation**

- 1. Connect the current meter between Pin 11 of the FBT (T504) and the PCB land where Pin 11 would normally attach. (See Figure 1 on the following page.)
- 2. Input a dot signal and set PICTURE and BRIGHTNESS to minimum: IABL =  $100 + 100/-95\mu A$ .
- 3. Confirm the voltage of A Board TP-600 is  $135 \pm 3$  VDC.
- 4. Connect the digital voltmeter and the DC power supply via diode 1SS119 to C574 (+) and ground. (See Figure 1 on the following page.)
- Increase the DC power voltage gradually until the picture blanks out.
- 6. Read the digital voltmeter indication. (standard: less than or equal to 141.3 VDC).
- 7. Turn DC power source off immediately
- Input a white signal and set PICTURE and BRIGHTNESS to maximum.
- 9. Repeat steps 4 to 7.

# Hold-down Readjustment

If the setting indicated in step 2 of Hold-down Operation Confirmation cannot be met, readjustment should be performed by altering the resistance value of R584, a component marked with  $\blacksquare$ .



# 4-2. B+ VOLTAGE CONFIRMATION AND ADJUSTMENT

Note: The following adjustments should always be performed when replacing the following components, which are marked with  $\square$  on the schematic diagram.

IC601, IC602

- 1. Using a Variac, apply AC input voltage:  $130 \pm 2$  VAC (or  $120-220 \pm 2$  VAC for KV-29SL42K).
- 2. Input a dot signal.
- 3. Set the PICTURE and BRIGHTNESS controls to minimum.
- 4. Set to Service Adjustment Mode.
- 5. Select PADJ with 1 and 4.
- 6. Adjust with 6 to the 0 level.
- Confirm the voltage of A board TP-600 is less than 138 VDC.
- 8. If step 7 is not satisifed, replace the components and repeat the above steps.
- 9. Supply  $120 \pm 2$  VAC (or  $120-220 \pm 2$  VAC for KV-29SL42K) to the set with a variable auto transformer.
- 10. Adjust with  $\boxed{3}$  and  $\boxed{6}$  for  $135 \pm 3$  VDC.
- 11. Press MUTING then ENTER to save into the memory.

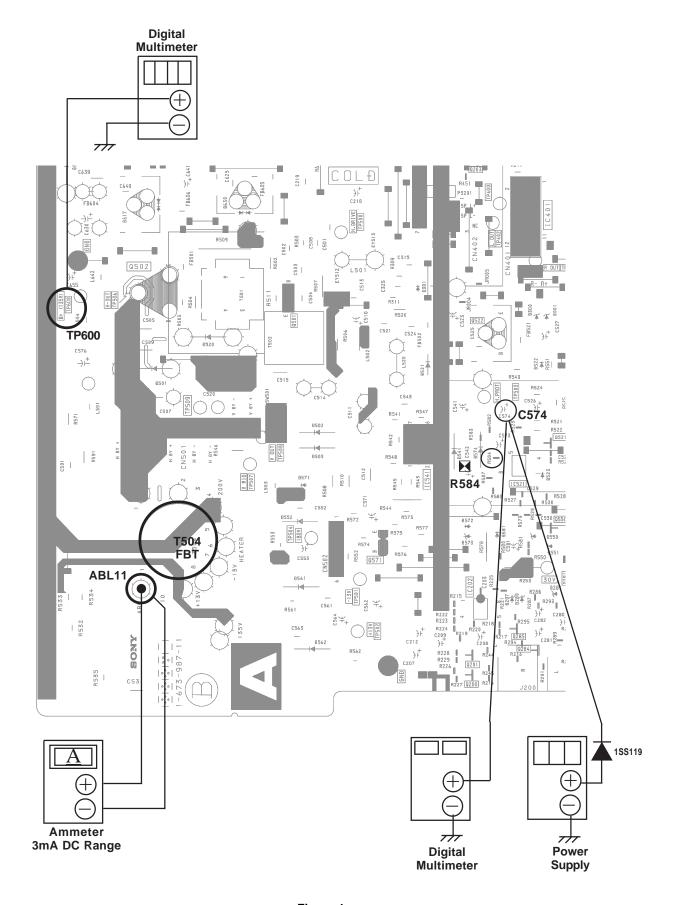


Figure 1

# SECTION 5 CIRCUIT ADJUSTMENTS

# **Electrical Adjustment by Remote Commander**

Use the Remote Commander (RM-Y165, RM-Y167 or RM-Y149A) to perform the circuit adjustments in this section.

NOTE: Test Equipment Required:

- · Pattern generator
- Frequency counter
- · Digital multimeter
- · Audio oscillator

# 5-1. Setting the Service Adjustment Mode

- 1. Standby mode (power off).
- Display → Channel 5 → Sound volume + → Power ON on the Remote Commander (press each button within a second).

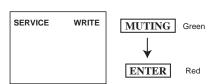
# Service Adjustment Mode On

1. The CRT displays the item being adjusted.



- 2. Press or 4 on the Remote Commander to select an item.
- 3. Press 3 or 6 on the Remote Commander to change the data.
- 4. Press MUTING then ENTER to save into the memory.

# **Service Adjustment Mode Memory**



1. Press 8 then ENTER on the Remote Commander to initialize.



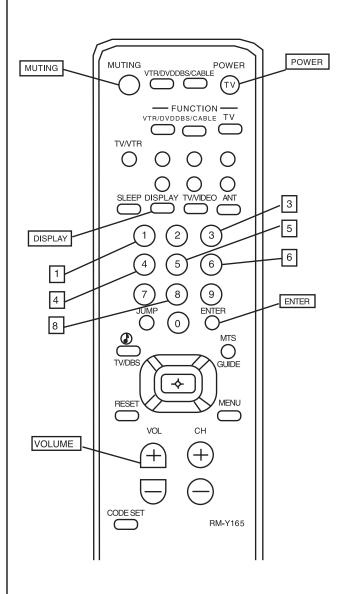
Carry out step 1 when adjusting IDs 0–4 and when replacing and adjusting IC003.

2. Turn set off then on to exit service adjustment mode.

# 5-2. Memory Write Confirmation Method

- 1. After adjustment, remove the power plug from the AC outlet, then plug it in again.
- 2. Turn the power switch ON and set to service mode.
- 3. Call the adjusted items again to confirm they were adjusted.

# 5-3. Adjust Buttons and Indicators



RM-Y165

# **Adjustment Items**

	Service		Data	Initial Value	Average Data
Item	Name	Name	Range	illiliai value	Average Data
1	HSIZ	A_HSIZE	0-63	31	42
2	HPOS	A_HPOS	0-63	31	22
3	VBOW	A_AFCB	0-15	7	6
4	VANG	A_AFCB	0-15	7	6
5	TRAP	A_TRAP	0-15	7	7
6	PAMP	A_PAMP	0-63	31	16
7	CPIN	A_CPIN	0-63	31	34
8	VSIZ	A_VSIZ	0-63	31	33
9	VPOS	A_VPOS	0-63	31	38
10	VLIN	A_SCOR	0-15	7	6
11	SCOR	A_SCOR	0-15	7	7
12	VZOM	A_SCROLL	0-1	0	0
13	EHT	A_TRAP	0-15	7	4
14	ASP	A_ASPECT	0-63	63	48
15	SCRL	A_SCROLL	0-63	31	31
16	HBLK	A_ASPECT	0-1	0	1
17	LBLK	A_HBLK	0-15	7	15
18	RBLK	A_HBLK	0-15	7	3
19	VUSN	A_ASPECT	0-1	0	0
20	HDW	A_PON	0-1	0	0
21	EWDC	A_HSIZE	0-1	0	0
22	LVLN	A_VLIN	0-15	0	0
23	UVLN	A_VLIN	0-15	0	0
24	RDRV	A_RDRIVE	0-63	31	14
25	GDRV	A_GDRIVE	0-63	31	10
26	BDRV	A_BDRIVE	0-63	31	8
27	RCUT	A_RCUT	0-15	7	8
28	GCUT	A_GCUT	0-15	7	4
29	BCUT	A_GCUT	0-15	7	5
30	DCOL	A_GDRIVE	0-1	0	1
31	SHUE	A1_SUBHUE	0-31	14	9
32	SCOL	A1_SUBCOL	0-31	14	23
33	SBRT	A1_SUBBRT	0-31	14	10
34	RON	A_VIDSEL	0-1	0	1
35	GON	A_VIDSEL	0-1	0	1
36	BON	A_VIDSEL	0-1	0	1
37	AXPL	A_PON	0-1	0	0
38	AXNT	A_SHPF0	0-1	0	0
39	CBPF	A_XTAL	0-1	0	1
40	CTRP	A_XTAL	0-1	0	1
41	COFF	A_COFF	0-1	0	0
42	KOFF	A_COFF	0-1	0	0
43	SSHP	A1_SUBSHP	0-15	8	6
44	SHPF	A_SHPF0	0-1	0/0 *2	1
45	PREL	A_DCTRAN	0-1	0	1
46	Y-DC	A_DCTRAN	0-1	0	1
47	GAMM	A_BDRIVE	0-3	0	0
48	ABLM	A_RDRIVE	0-1	1	1
49	VTH	A_RDRIVE	0-1	0	1
50	YDEL	A_HOSC	0-15	7	7
51	NCOL	A_PIC	0-1	0	1
52	FSC	A_PIC	0-1	0	1
53	K-ID	A_KID	0-1	0	0
54	HOSC	A_HOSC	0-15	7	7
55	VSS	A_FFREQ	0-1	0	0
56	HSS	A_FFREQ	0-1	0	0
57	HMSK	A_VSIZ	0-1	0	1
58	VTMS	A_TVOFF	0-3	0 / 1 * 2	0
59	CDMD	A_FFREQ	0-3	0/1 *2	0
60	AFC	A_VPOS	0-3	0/0 *2	0
61	FIFR	A_FFREQ	0-3	0	3

		ı		I	ı
Item	Service Name	Initial value		Average Data	
62	SBAS		0-15	7	8
63	STRE		0-15	7	9
64	SBAL	A1_SUBBAL	0-31	14	13
65	DISP	A_OSDPOS	0-127	0	11
66	PADJ	A_PADJ	0-63	3	51
67	HCHM	A6_HCHM	0-255	69	69
68	HCLM	A6_HCLM	0-255	16	16
69	HCHS		0-255	69	69
70	HCLS		0-255	16	16
71	PFRN		0-1	0	0
72	PRVS		0-1	0	0
73	PCON		0-127	32	70
74	PUCO		0-127	75	63
75	PVCO		0-127	40	63
76	PHUE		0-31	15	15
77	PKIL		0-1	0	0
78	PSEP		0-3	2	2
79	PDCO		0-3	0	0
80	PEXP		0-3	2	2
81	PBGS		0-63	14	14
82	PYDL		0-15	3	7
83	PBRT		0-31	0	25
84	PVPE		0-16	0	0
85	PUPE		0-16	0	0
86	PACS		0-1	0	1
87	PSDL		0-3	0	0
88	PMVP		0-3	0	0
89	PCGA		0-1	0	1
90	PBIT		0-1	0	0
91	PAFC		0-1	0	0
92	PACC		0-63	21	20
93	PBUR		0-1	0	0
94	PEVE		0-1	0	0
95	PINW		0-1	0	0
96	PINR		0-1	0	0
97	PREF		0-1	0	0
98	PARE		0-1	1	1
99	PAVE		0-1	0	0
100	PFRA		0-15	0	0
101	PPAL		0-255	0	0
102	PHPO		0-31	31	2
103	PVPO		0-31	21	22 10
	PHTI PHAJ		0-15	10	10
105 106	PBGY		0-15 0-15	0	0
106	PCRO		0-15	0	0
107	PPAR		0-63	2	2
109			0-63	0	4
	PVCH		0-1	0	0
111	PVON		0-1	0	1
	PVLN		0-31	17	17
	PVSB		0-255	64	64
114	PVLV		0-255	130	130
	ID0	A_NVMID0	0-255	23	See ID map
116	ID1	A_NVMID1	0-255	3	See ID map
117	ID2	A NVMID2	0-255	11	See ID map
118	ID3	A_NVMID3	0-255	1	See ID map
	ID4	A_NVMID4	0-255	23	See ID map
_	ID5	A_NVMID5	0-255	0	See ID map
	ID6	A6_NVMID6	0-255	0	See ID map
122	ID7	A6 NVMID7	0-255	64	See ID map

\*2: TV/VIDEO

#### Notes:

No. 1–122 show the order that each adjustment mode may be selected while in service mode.

Data Range shows the range of possible settings for each adjustment mode.

Initial Data shows the standard settings for each adjustment mode.



# **Feature ID Map**

MODEL	DEST.	ID-0	ID-1	ID-2	ID-3	ID-4	ID-5	ID-6	ID-7
KV-27V42	US	25	151	175	234	11	3	0	64
KV-27V66	US	25	151	237	234	11	3	7	64
KV-27V66	CND	89	151	237	154	11	3	7	64
KV-29SL42K	KOREA	137	145	15	203	27	3	0	64
KV-29SL42T	TAIWAN	9	145	15	203	27	3	0	64
KV-29VL42T	TAIWAN	9	151	175	202	27	3	0	64
KV-29XL42T	TAIWAN	9	145	15	203	27	3	0	64

# 5-4. A BOARD ADJUSTMENTS

# H. Frequency Adjustment

- 1. Input a monoscope signal.
- 2. Set to Service Adjustment Mode.
- 3. Connect a frequency counter to base of Q501 (TP-500 H. DRIVE).
- 4. Select the item of AFC, set to 3 level (free run).
- 5. Check H. Frequency for the  $15735 \pm 200$  Hz.
- 6. Select the AFC item again and adjust level to 0.
- 7. Press MUTING then ENTER to save into the memory.

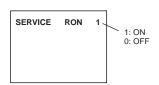
# V. Frequency Adjustment

- 1. Select video 1 with no signal input.
- 2. Set the conditions for a standard setting.
- 3. Connect the frequency counter across TP-508 or CN501 VDY (+) pin 6 connector and ground.
- 4. Check that V. Frequency shows  $60 \pm 4$  Hz.

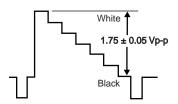
# **Sub Contrast Adjustment (RDRV)**

- 1. Input a color-bar signal.
- 2. Set the red color.
- 3. Set to Service Adjustment Mode.
- 4. Select the item DCOL level to 0.
- 5. Set the conditions as follows:

PICTURE: MAX
COLOR: MIN
BRIGHT: CENTER
R ON: ON (1)
G ON: OFF (0)
B ON: OFF (0)



- 6. Connect an oscilloscope probe to CN301 pin ③ (R OUT) and ground.
- 7. Select RDRV with 1 and 4.
- 8. Adjust with  $\boxed{3}$  and  $\boxed{6}$  for  $1.75 \pm 0.05$  Vp-p



- 9. Reset the item DCOL to 1.
- 10. Return the following back to normal after adjustment.
- 11. Press MUTING then ENTER to save into the memory.

PICTURE: MAX
COLOR: CENTER
BRIGHT: CENTER
R ON: ON (1)
G ON: ON (1)
B ON: ON (1)

# **Display Position Adjustment (DISP)**

- 1. Input a color-bar signal.
- 2. Set to Service Adjustment Mode.
- 3. Select DISP with 1 and 4.
- 4. Adjust with 3 and 6 to adjust characters to the center.
- 5. Press MUTING then ENTER to save into the memory.
- 6. Check to see if the text is displayed on the screen.

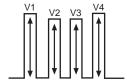


# **Sub Bright Adjustment (SBRT)**

- 1. Input a crosshatch signal.
- 2. Set to Service Adjustment Mode.
- 3. Set the PICTURE and BRIGHTNESS to minimum.
- 4. Select the SBRT item with 1 and 4.
- 5. Adjust with 3 and 6 to obtain a faintly visible crosshatch.
- 6. Press MUTING then ENTER to save into the memory.

# Sub Hue, Sub Color Adjustment (SHUE, SCOL)

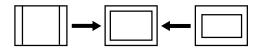
- 1. Input a color-bar signal.
- 2. Set to Service Adjustment Mode.
- 3. Select the DCOL item and set the value to 0.
- 4. Connect an oscilloscope probe to CN702 Pin (5) (BLUE OUT) of the C Board and ground.
- 5. Select SHUE and SCOL with 1 and 4.
- 6. Adjust with  $\boxed{3}$  and  $\boxed{6}$  for the V1 = V4  $\pm$  0.15 Vp-p (SCOL) and V2 = V3  $\pm$  0.15 Vp-p (SHUE).



- 7. Reset the DCOL level to 1.
- 8. Press MUTING then ENTER to save into memory.

# V. Size Adjustment (VSIZ)

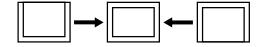
- 1. Input a crosshatch signal.
- 2. Set to Service Adjustment Mode.
- 3. Select the VSIZ item with 1 and 4.
- 4. Adjust value of VPOS with 3 and 6 for the best vertical center.



5. Press MUTING then ENTER to save into the memory.

# V. Center Adjustment (VPOS)

- 1. Input a crosshatch signal.
- 2. Set to Service Adjustment Mode.
- 3. Select the VPOS item with 1 and 4.
- 4. Adjust value of VPOS with 3 and 6 for the best vertical center.

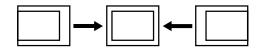


5. Press MUTING then ENTER to save into the memory.

# H. Center Adjustment (HPOS)

Perform this adjustment after checking H. Frequency.

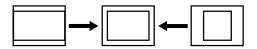
- 1. Input a crosshatch signal.
- 2. Set to Service Adjustment Mode.
- 3. Select the HPOS item with 1 and 4.
- 4. Adjust the value of HPOS with 3 and 6 for the best horizontal center.



5. Press MUTING then ENTER to save into the memory.

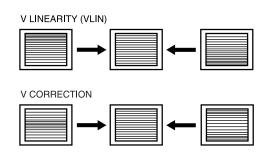
# H. Size Adjustment (HSIZ)

- 1. Input a crosshatch signal.
- 2. Set to Service Adjustment Mode.
- 3. Select HSIZ with 1 and 4.
- 4. Adjust with 3 and 6 for the best horizontal size.
- 5. Press MUTING then ENTER to save into the memory.



# V. Linearity (VLIN), V Correction

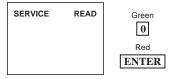
- 1. Input a crosshatch signal.
- 2. V. correction is automatically adjusted from the circuit and should satisfy the conditions below.

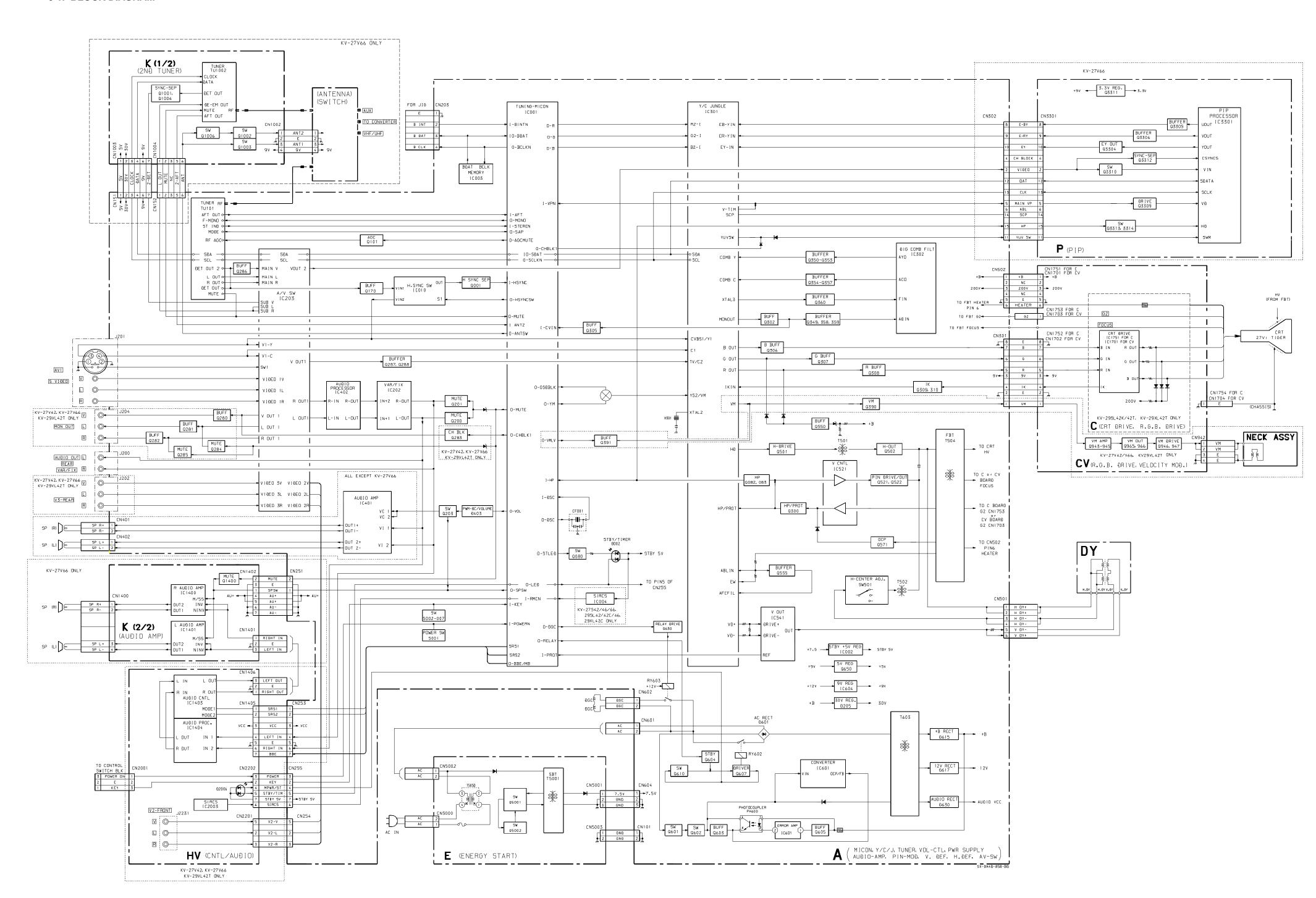


# **Service Adjustment Mode Memory**

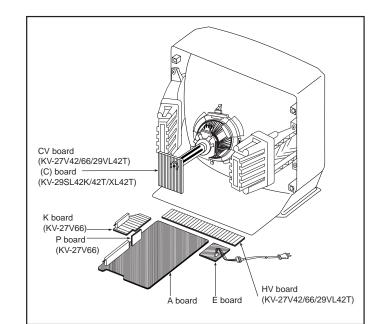
- 1. Change the value of the DCOL item to 1.
- 2. After completing all adjustments, press 0 then ENTER.

#### Read From Memory





# 6-2. CIRCUIT BOARD LOCATIONS



# 6-3. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

- All capacitors are in  $\mu F$  unless otherwise noted. pF:  $\mu \mu F$  50 WV or less are not indicated except for electrolytic and tantalums.
- All electrolytics are 50V unless otherwise specified.
- Indication of resistance, which does not have one for rating electrical power, is as follows:
   Pitch: 5mm
- Rating electrical power 1/4W (CHIP: 1/10W)
- $K\Omega = 1000\Omega$   $M\Omega = 1000K\Omega$

All resistors are in ohms.

- \_ : nonflammable resistor
- fusible resistor : internal component
- \_\_\_\_\_ : panel designation and adjustment for repair
- ; earth-chassis
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- The components identified by 
  in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

 When replacing parts shown in the table below, be sure to perform the related adjustments.

Part Replaced ( )	Adjustment (►)
DY, C511, C573, C574, C575, D572, D573, D574, R582, R583, R585, R586, R578, R625, R626, R504, IC301, IC521, IC602, C507, C508, C505, C509, C515, C520, C591, L501,	(R584)

- IC601, IC602 B+ VOLTAGE CONFIRMATION
- All voltages are in Volts
- Voltage is DC with respect to ground unless otherwise noted.
- Readings are taken with a 10M $\Omega$  digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerance.
- Circled numbers are waveform references.
- \* : cannot be measured
- \_\_\_\_\_ : B + Line
- ---- : B Line
- 📥 : Signal path

# Reference Information

iverenence ii	1101	mation	
RESISTOR	:	RN	METAL FILM
	:	RC	SOLID
	:	FPRD	NON FLAMMABLE CARBON
	:	FUSE	NON FLAMMABLE FUSIBLE
	:	RW	NON FLAMMABLE WIREWOUND
	:	RS	NON FLAMMABLE METAL OXIDE
	:	RB	NON FLAMMABLE CEMENT
	:	$\times$	ADJUSTMENT RESISTOR
COIL	:	LF-8L	MICRO INDUCTOR
CAPACITOR	:	TA	TANTALUM
	:	PS	STYROL
	:	PP	POLYPROPYLENE
	:	PT	MYLAR
	:	MPS	METALIZED POLYESTER
	:	MPP	METALIZED POLYPROPYLENE

# : ALB BIPOLAR : ALT HIGH TEMPERATURE : ALR HIGH RIPPLE

**— 26 —** 

The components identified by shading and △ mark are critical for safety. Replace only with the part number specified.

The symbol (displayed on component side of the circuit board) indicates fast operating fuse. Replace only with fuse of the same rating as marked.

-23-

**— 27 —** 

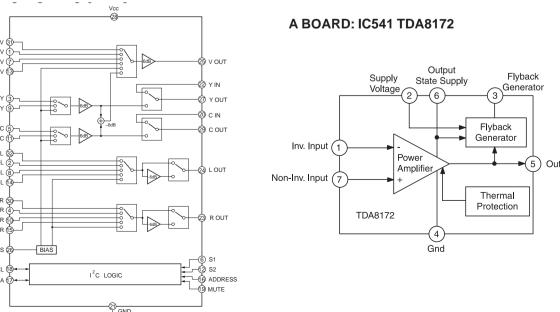
# A BOARD LOCATION LIST D306 I-11 D605 A-12 D388 H-10 D606 C-13 D403 H-12 D607 D-13 D501 B-5 D608 A-10 D502 E-4 D609 A-10 D503 E-4 D610 C-11 D611 D-11 D-11 D503 E-4 D610 C-11 D520 C-6 D611 D-11 D521 F-5 D612 D-14 D522 G-6 D613 D-10 D523 H-4 D614 D-10 D541 F-4 D615 A-8 D550 H-3 D617 B-8 D551 H-3 D620 F-13 D552 D-3 D630 C-8 D561 D-3 D640 B-15 D562 E-2 D650 D-10 D571 D-4 IC D572 G-3 IC001 J-13 IC601 C-10 IC602 F-10 IC604 F-10 TRANSISTOR | D541 | F-4 | D615 | A-8 | Q001 | I-12 | Q309 | I-11 | Q310 | I-11 | Q310 | I-11 | Q310 | I-11 | Q310 | I-11 | Q349 | H-6 | Q350 | I-3 | Q350 | I-4 | Q350 | I-3 | Q350 | I-3 | Q350 | I-4 | Q350 | I-3 | Q350 | I-3 | Q350 | I-3 | Q350 | I-3 | Q350 | I-4 | Q350 | I-3 D207 G-2 D208 G-8 D250 I-2 D251 I-2 D252 I-2 D253 J-2 D254 J-2 D255 J-2 D280 J-2 D281 H-2 D302 G-10 D303 J-12 Q607 F-13 Q610 F-13 [TUNING CONTROL, Y/C/J, POWER SUPPLY, DEFLECTION, TUNER/IF, AUDIO, MTS] 12 10 14 15 CN602 SONY 1-673-987-11 NISOV K PR PR PR 1472 A Board -

# A BOARD (\* ) MARK VARIANT LIST

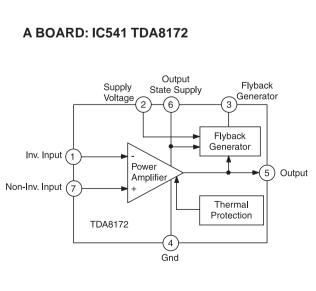
REF NO.	LOC.	KV-24SL42K	KV-29SL42T/ XL42T	KV-29VL42T	KV-27V42	KV-27V66
C216	C-17	0.47	0.47	0.47	0.47	#
C217	C-17	0.47	0.47	0.47	0.47	#
C230	C-16	#	#	0.22	0.22	#
C237	C-16	#	#	0.22	0.22	#
C239	B-16	#	#	0.0047	0.0047	#
C240	B-17	#	#	0.0047	0.0047	#
C250	C-7	#	#	#	#	1
C251	C-7	#	#	#	#	1
C252	C-6	#	#	#	#	0.47
C280	B-7	#	#	470 25V	470 25V	470 25V
C281	B-8	#	#	0.47	0.47	0.47
C282	B-8	#	#	0.47	0.47	0.47
C370	F-12	#	#	#	#	0.01
C371	F-12	#	#	#	#	0.01
C372	F-13	#	#	#	#	0.01
C380	F-12	0.01	0.01	0.01	0.01	#
C381	F-12	0.01	0.01	0.01	0.01	#
C382	F-13	0.01	0.01	0.01	0.01	#
C418	F-9	10	10	10	10	#
C613	M-3	560 400V	680 250V	680 250V	680 250V	680 250V
C616	K-4	0.022 400V	#	#	#	#
C617	L-4	220P	#	#	#	#
C627	E-2	#	#	#	#	0.1
CN151	D-1	#	#	#	#	8P WHT
CN152	F-1	#	#	#	#	6P WHT
CN251	A-16	#	#	#	#	7P WHT
CN252	A-17	#	#	3P	3P	#
CN253	A-15	#	#	7P	7P	7P
CN301	H-19	5P	5P	8P	8P	8P
CN302	E-19	#	#	#	#	15P
D002 D208	J-3	LNK0120022G	LNK0120022G	#	#	# NATZ L T ZZ 0 0 0
	D-16	RD10ESB2	RD10ESB2	RD10ESB2	RD10ESB2	MTZJ-T-77-2.2A
D280 D281	B-9 B-8	#	#	MTZJ-3.3 MTZJ-3.3	MTZJ-3.3 MTZJ-3.3	MTZJ-3.3 MTZJ-3.3
		<b>!</b> "	<b>!</b> "			
D403 D609	F-8 L-4	1SS133T-77 RU-1P	1SS133T-77	1SS133T-77 RU-1P	1SS133T-77 #	#
			**	#	#	#
IC004	J-2 C-6	IC SBX1981-51	IC SBX1981-51	+ · ·	***	# MM1313AD/
IC203 IC401		MM1311AD TDA7057AQ/N2	MM1311AD TDA7057AQ/N2	MM1311AD TDA7057AQ/N2	MM1311AD	#
	B-18				TDA7057AQ/N2	+
IC601	L-5	STR-F6656 #	STR-F6626	STR-F6626 3P	STR-F6626 3P	STR-F6626 3P
J202 J204	B-11 B-9	#	***	3P	3P	3P
PS201			# 1-582-984-11	<u> </u>		#
	C-17	1-582-984-11		1-582-984-11	1-582-984-11	+
Q080 Q280	F-7	#	#	2SD601A-Q	2SD601A-Q 2SA1162-G	2SD601A-Q 2SA1162-G
	B-7			2SA1162-G		
Q281	B-7	#	#	2SA1162-G	2SA1162-G	2SA1162-G
Q282	B-7	#	#	2SA1162-G	2SA1162-G	2SA1162-G
Q283	B-7	#	#	2SD601A-Q	2SD601A-Q	2SD601A-Q
Q284 Q285	B-8 B-9	#	#	2SD601A-Q 2SD601A-Q	2SD601A-Q 2SD601A-Q	2SD601A-Q 2SD601A-Q
			***			+
Q349 Q390	I-12 J-14	2SC1623-L5L6 #	2SD601A-Q #	2SC1623-L5L6	2SD601A-Q	2SC1623-L5L6 2SD601A-Q
	K-14			2SD601A-Q	2SD601A-Q	
Q391 R020	J-5	# 6.8K	# 6.8K	2SD601A-Q #	2SD601A-Q #	2SD601A-Q #
				#	#	#
R021	J-6	680	680	+		+
R022	J-6	820	820	#	#	#
R023	J-5	2.2K	2.2K	#	#	#
R065	I-2	#	#	#	# 22K	#
R080	F-8		#	22K		22K
R082	F-8 I-3	#	#	10K 470	10K 470	10K
R083						470
R084	G-8	#	#	10K	10K	10K
R090	J-4	10K	10K	#	#	#
R174	C-3	#	#	#	#	#
R175	C-3	#	#	#	#	#
R211	D-16	100 1/6W	100 1/6W	100 1/6W	100 1/6W	#
R212	D-18	4.7K 1/4W	4.7K 1/4W	4.7K 1/4W	4.7K 1/4W	#
Doc 1			1 11 1117	5.6K	5.6K	#
R231 R232	C-16 C-16	2.2K 10K	2.2K 10K	#	#	#

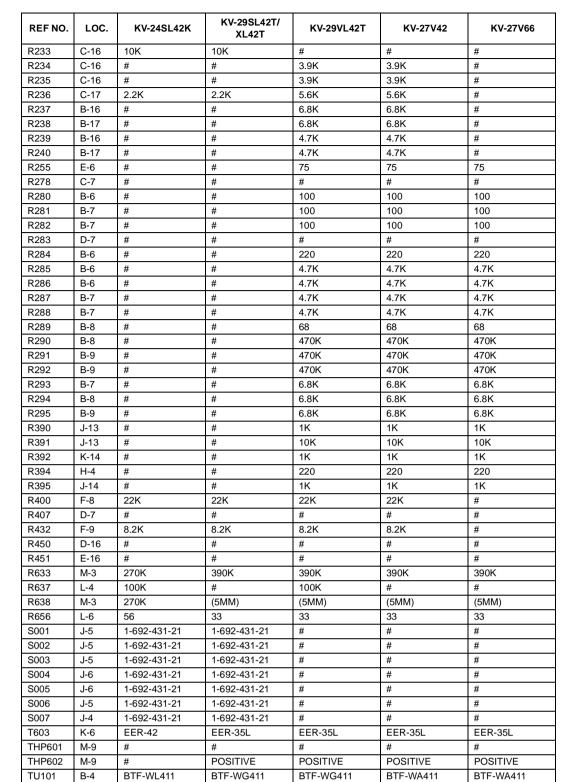
# A BOARD: IC203 MM1311AD (EXCEPT KV-27V66)

4/22/99, 3:11 PM



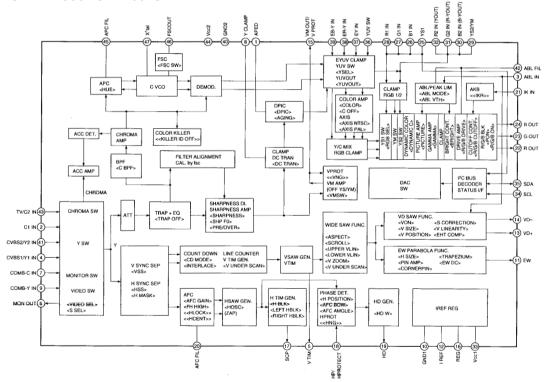
**— 29 —** 



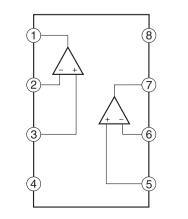


#: NOT MOUNTED





# A BOARD: IC521 NJM4558M-TE2



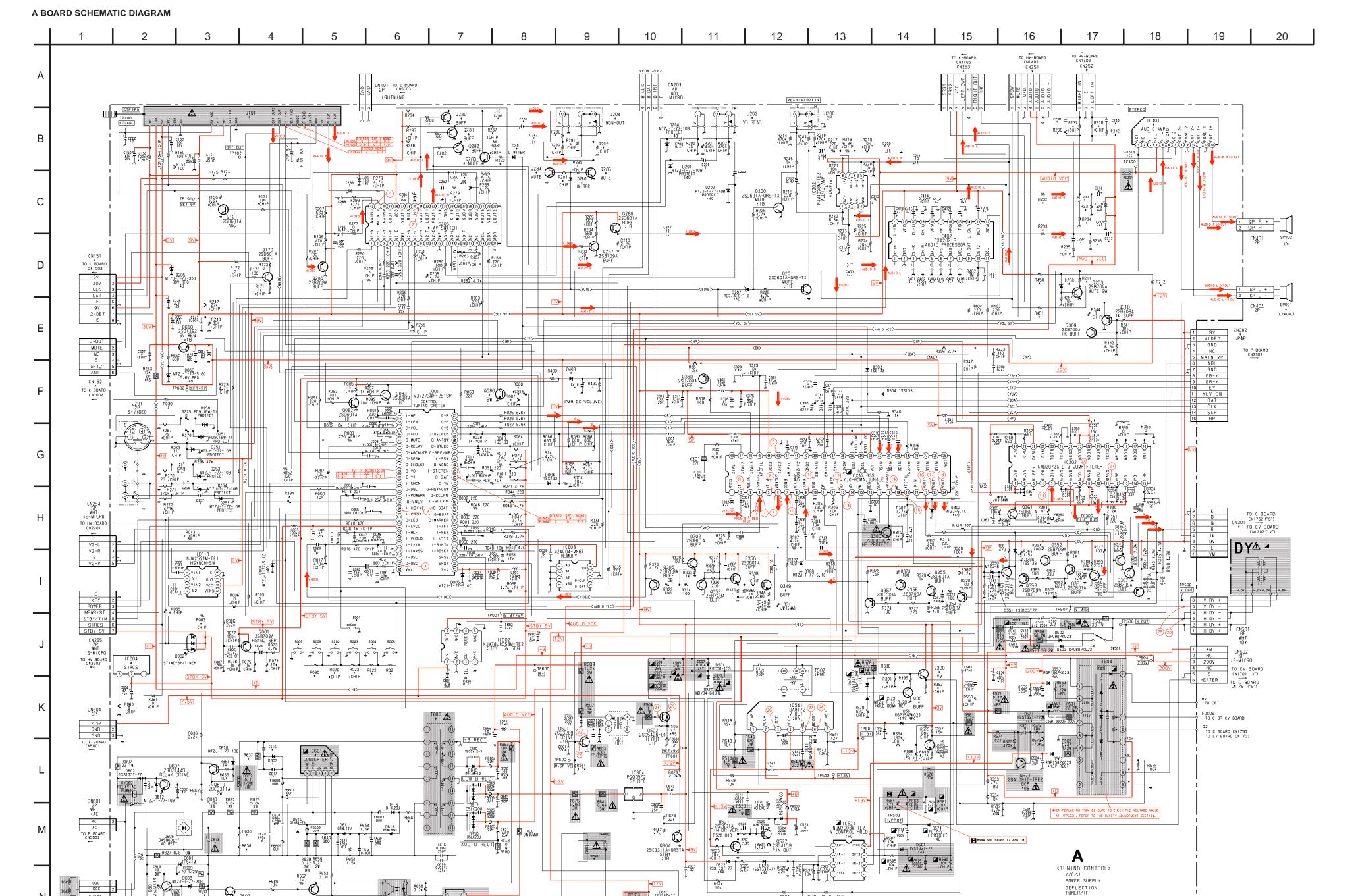


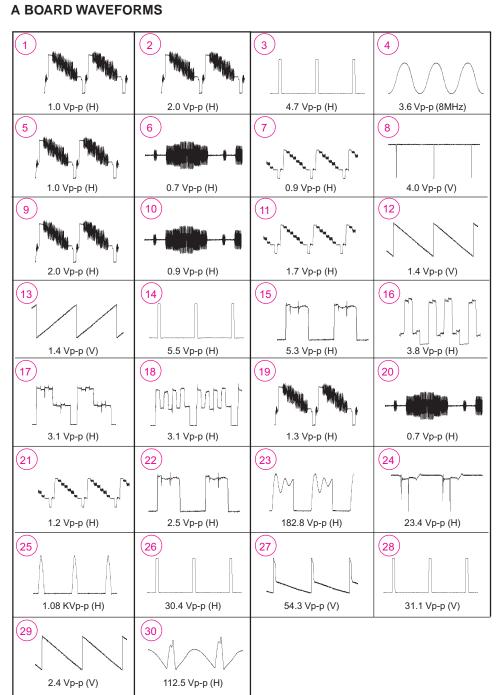
Portions of the circuit marked as shown are high voltage areas. Use care to prevent electric shocks during inspection or repair.

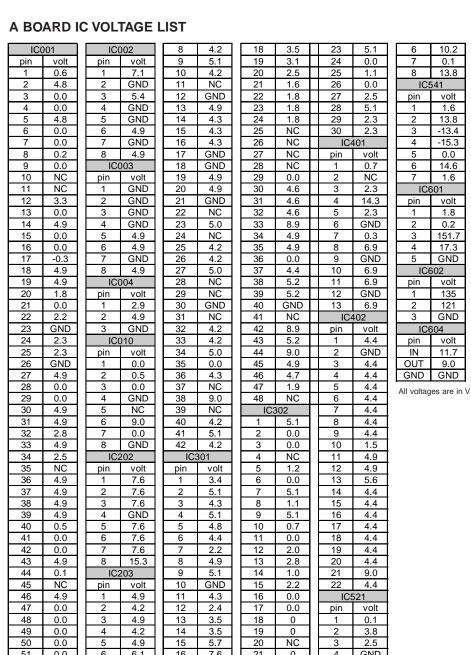
**— 30 —** 

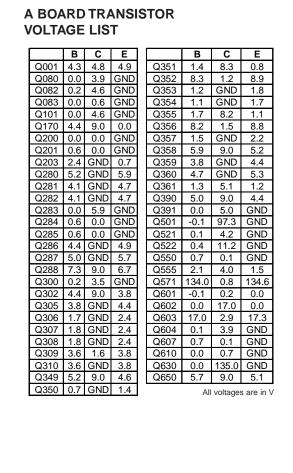
**— 28 —** 

# KV-27V42/27V66/29SL42K/29SL42T/29VL42T/29XL42T









**— 31 —** 

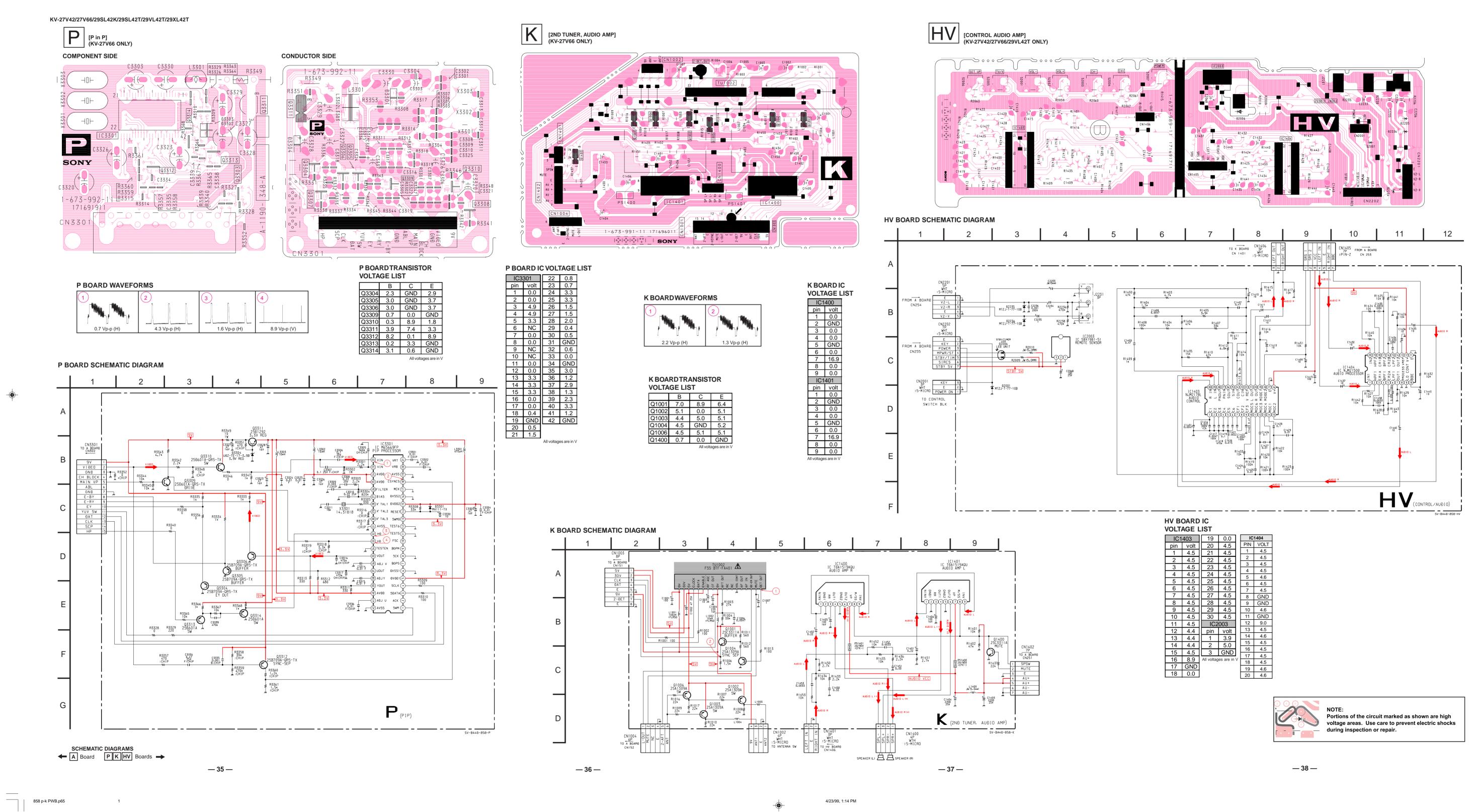
-32 -

OV. DATA. SEG...

**— 33 —** 

**— 34 —** 

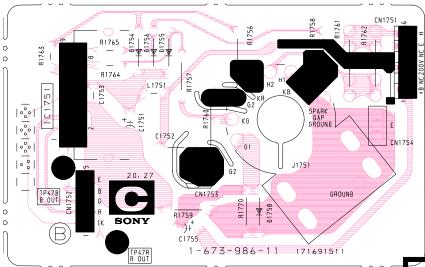
4/22/99, 2:37 PM



4/23/99, 1:14 PM

#### KV-27V42/27V66/29SL42K/29SL42T/29VL42T/29XL42T

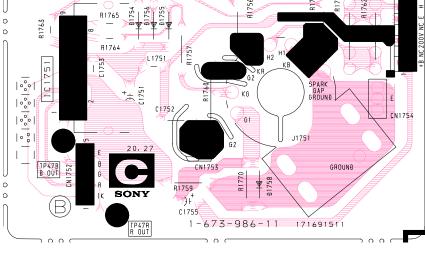




# C BOARD IC **VOLTAGE LIST**

IC1751							
pin	volt						
1	2.3						
2	2.3						
3	2.3						
4	GND						
5	2.3						
6	198.1						
7	137.3						
8	138.6						
9	140.8						

All voltages are in V

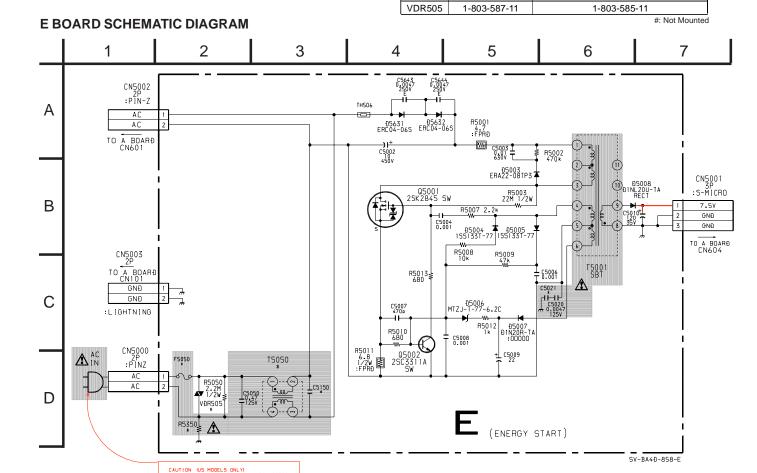


Portions of the circuit marked as shown are high voltage areas. Use care to prevent electric shocks

# **C BOARD WAVEFORMS** 168.2 Vp-p (H)

**C BOARD SCHEMATIC DIAGRAM** 

during inspection or repair.



-673-988-11 (CN5001) 171691611 R5350

0.0

D

157.6

All voltages are in V

CN5003

E BOARD (\*) MARK VARIANT LIST

0.0047 125V

6.3A 250V

8.2M

1-424-220-11

C5021

C5150

F5050

R5350

T5050

REF NO. KV-29SL42K KV-27V42/V66/29SL42T/VL42T/XL42T

JW(7.5MM)

0.47

6.3A 125V

4.7M

1-426-717-11

[ENERGY START]

**E BOARD TRANSISTOR VOLTAGE LIST** 

0.1

0.4

1.5

Q5002

Q5001

3 5 6 7 FOCUS TO A BOARD CN1754 :PIN-J TAB (CONTACT) T504 (FBT) Α G2 R1762 3.3 2W :RS KG KB G2 ⚠ В R1756 Ik I/2W С CN1752 5P :S-MICRO TO A BOARĐ 11756 11754 11755 15583TD 15583TD 15583TD D TP47BYB OUT Ε  $\boldsymbol{C_{\scriptscriptstyle{\boldsymbol{278}}}}_{\scriptscriptstyle{\boldsymbol{18.6.8.}}}(^{\scriptscriptstyle{\mathsf{CRT}}}_{\scriptscriptstyle{\mathsf{R.G.B.}}},^{\scriptscriptstyle{\mathsf{DRIVE}}})$ TO A BOARE

**— 40 —** 

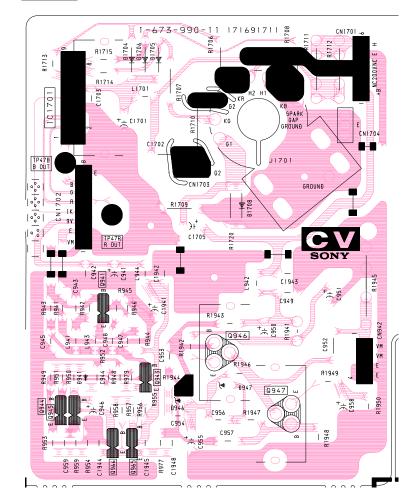
E C board.p65 4/22/99, 3:17 PM

-39 -

## KV-27V42/27V66/29SL42K/29SL42T/29VL42T/29XL42T



# [CRT DRIVE, R.G.B. DRIVE, VELOCITY MODULATION] (KV-27V42/27V66/29VL42T ONLY)



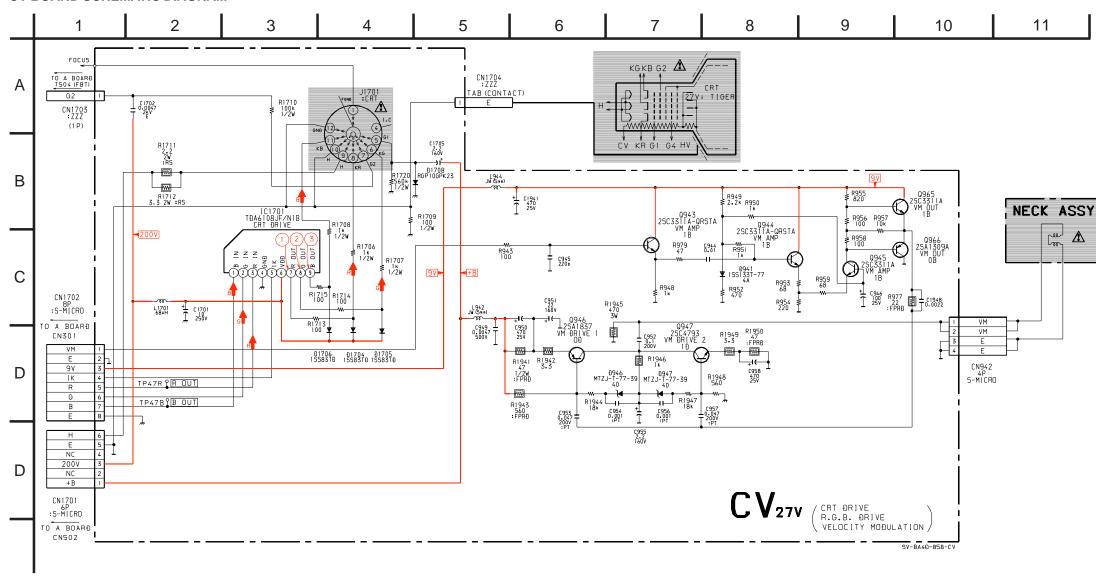
# **CV BOARD WAVEFORMS**





Portions of the circuit marked as shown are high voltage areas. Use care to prevent electric shocks during inspection or repair.

# CV BOARD SCHEMATIC DIAGRAM



# **CV BOARD TRANSISTOR VOLTAGE LIST**

_			
	В	C	Е
Q943	4.5	8.9	3.7
Q944	2.1	8.9	1.5
Q945	2.1	6.0	1.5
Q946	133.2	67.1	134.7
Q947	0.9	67.1	0.3
Q965	6.5	8.9	6.2
Q966	6.0	0.0	6.2

All voltages are in V

# CV BOARD IC **VOLTAGE LIST**

IC1	701	
pin	volt	
1	2.3	
2	2.3	
3	2.3	
4	GND	
5	3.7	
6	203.6	
7	129.0	
8	126.0	
9	127.0	
All voltag	es are in \	/

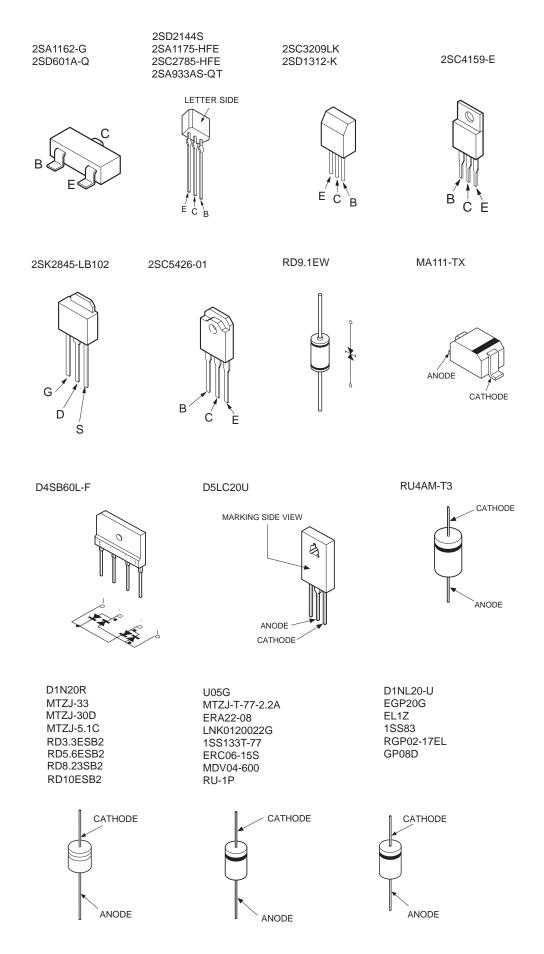
SCHEMATIC DIAGRAMS ← E C Boards CV Board →

**— 41 —** 

**— 42 —** 

CV board.p65 4/22/99, 3:16 PM

# 6-4. SEMICONDUCTORS



# SECTION 7 EXPLODED VIEW

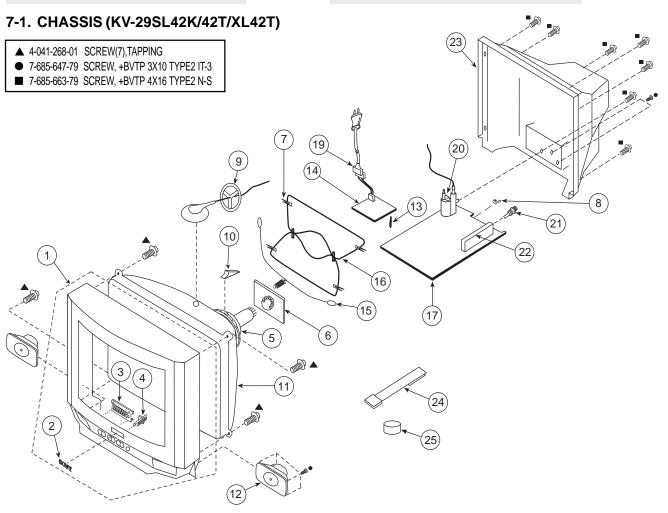
 Items with no part number and no description are not stocked because they are seldom required for routine service.

- The component parts of an assembly are indicated by the reference numbers in the remarks column.
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

#### Note:

The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

#### Note:



REF.	NO.	PART NO.	DESCRIPTION	<u>REMARK</u>
1		X-4035-815-1	BEZNET ASSY (KV-29SL42T/29SL42K	) 2-4
1		X-4035-818-1	BEZNET ASSY (KV-29XL42T ONLY)	2-4
2		4-046-160-11	EMBLEM(NO.9),SONY	
3		4-063-573-01	BUTTON,MULTI	
4	*	4-063-570-01	GUIDE,LED	
5	$\wedge$	8-451-486-21	DY, Y29NXA-V2	
6	*	A-1331-920-A	,	
7		4-040-388-01		
8	*	4-064-646-01	* **	
9		3-704-372-31	HOLDER, HV CABLE	
10		4-053-005-01	SPACER,DY	
11	$\triangle$	8-733-873-05	CRT, 29NX	
12		1-504-531-11	SPEAKER,(13.1X6.2CM)	
13	*	3-703-353-05	SUPPORT,PC BOARD	
14	*	A-1343-654-A	E (VAR) MOUNTED PC BOARD (KV-2	29XL42T/29SL42T)
14	*	A-1343-656-A	E (VAR) MOUNTED PC BOARD (KV-2	29SL42K ONLY)

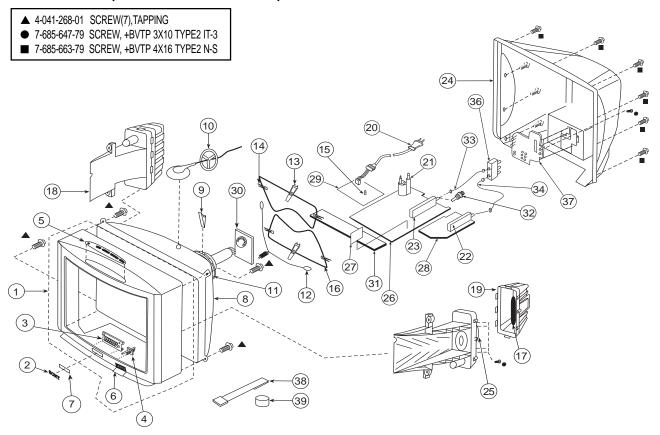
RE	F. NO.	PART NO.	<u>DESCRIPTION</u>	<u>REMARK</u>
15		4-036-329-01	SPRING(B), TENSION	
16	$\triangle$	1-416-952-11	COIL, DEGAUSSING (K	V-29SL42K ONLY)
16	$\triangle$	1-416-918-11	COIL, DEMAGNETIC (K)	/-29XL42T/29SL42T)
17	*	A-1298-939-A	A COMPLETE PC BOA	RD (KV-29SL42K ONLY)
17	*	A-1298-940-A	A COMPLETE PC BOA	RD (KV-29XL42T/29SL42T)
19	Δ	1-790-317-21	CORD,AC POWER(WIT (KV-29SL42T ONLY)	TH CONNECTOR)
19	Δ	1-751-057-21	CORD, POWER (WITH	CONNECTOR)
20	$\triangle$	1-453-268-21	FBT,NX-4005//X4J4	
21		1-766-374-11	PLUG,F-PIN	
22	Δ	8-598-475-00	TUNER,BTF-WL411 (KV	/-29SL42K ONLY)
22	Δ	8-598-477-00	TUNER,BTF-WG411 (KV-29SL42T/29XL42T)	
23		4-063-572-32	COVER,REAR (KV-29S	L42K/29XL42T)
23		4-063-572-02	COVER, REAR (KV-29S	L42T ONLY)
24		4-062-047-01	PIECE A(110), CONV CO	DRRECT
25		1-452-032-00	MAGNET, DISC (KV-29X	(L42T/29SL42K ONLY)

The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

#### Note

Les composants identifies per un trame et une marque  $\triangle$  sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

# 7-2. CHASSIS (KV-27V42/V66/29VL42T)



_				
RE	F. NO.	PART NO.	DESCRIPTION	REMARK
1		X-4035-478-1	BEZNETASSY (KV-27V66 ONLY)	6
1		X-4036-606-1	BEZNETASSY (KV-29VL42T/27V42)	6
2		4-046-160-01	EMBLEM(NO.9),SONY	
3		4-052-907-11	BUTTON, MULTI (KV-29VL42T ONLY	)
4	*	4-052-897-01	GUIDE,LED	
5		1-473-549-21	SWITCH BLOCK, CONTROL	
6		4-052-906-01	DOOR,CONTROL	
7		4-031-698-01	SHEET,ADHESIVE	
8	$\triangle$	8-733-873-05	CRT, 29NX	
9		4-053-005-01	SPACER,DY	
10		3-704-372-31	HOLDER,HV CABLE	
11	Δ	8-451-486-11	DY, Y29NXA-V	
12		4-036-329-01	SPRING(B),TENSION	
13		4-040-387-01	HOLDER(M),DGC	
14		4-040-388-01	HOLDER(S),DGC	
15		3-703-353-05	SUPPORT,PC BOARD	
16	Δ	1-416-918-11	COIL,DEMAGNETIC	
17		4-374-745-31	CUSHION (A)	
18		X-4035-400-1	BAFFLE ASSY, SPEAKER	
19		X-4035-401-1	COVER ASSY, SPEAKER	
20		1-790-317-21	CORD,AC POWER(WITH CONNECT	TOR)
21	Δ	1-453-268-21	FBT,NX-4005//X4J4	

REF. N	<u>10.</u>	PART NO.	DESCRIPTION	REMARK
22	Δ	8-598-430-00	TUNER,BTF-FA401 (KV-27V6	6 ONLY)
23	Δ	8-598-431-00	TUNER, BTF-WA411 (KV-27V	(42/V66)
23	Δ	8-598-477-00	TUNER,BTF-WG411 (KV-29V	(L42T ONLY)
24		4-063-018-02	COVER, REAR (KV-27V66 Of	'
24		4-063-018-12	COVER,REAR (KV-29VL42T)	,
25		1-505-893-11	SPEAKER (8CM) (KV-27V66	
25		1-505-404-11	SPEAKER (8CM) (KV-29VL4	
26	*	A-1298-901-A	A COMPLETE PC BOARD (K	(V-27V42 ONLY)
26	*	A-1298-841-A	A COMPLETE PC BOARD (K	
26	*	71 1200 0 11 71	A COMPLETE PC BOARD (K	
27	*	A-1130-10 <del>1-</del> A	P COMPLETE PC BOARD (K	
28	*	A-1380-608-A	K (VAR) MOUNTED PC BOA	,
29	*	A-1343-654-A	E (VAR) MOUNTED PC BOA	RD
30	*	/\ 1001 0Z1 /\	CV MOUNTED PC BOARD	
31	*		HV (VAR) MOUNTED PC BO	
32		1-766-374-11	PLUG,F-PIN (KV-27V42/29VL	•
33		1-783-800-11	CABLE,PIN (KV-27V66 ONLY	,
34	*	1-557-056-31	CABLE,P-P (KV-27V66 ONLY	,
36		8-598-414-00	ANTENNA SWITCH AS-2F (K	
37		4-064-176-11	BRACKET, ANTENNA (KV-27)	
38		4-062-047-01	PIECE A(110),CONV CORRE	CT
39		1-452-032-00	MAGNET,DISC	

# SECTION 8 ELECTRICAL PARTS LIST

#### Note:

The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

#### Note:

Les composants identifies per un trame et une marque  $\triangle$  sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

- The components identified by 
   in this
  manual have been carefully factoryselected for each set in order to satisfy
  regulations regarding X-ray radiation.
  Should replacement be required, replace
  only with the value originally used.
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.



#### **RESISTORS**

- · All resistors are in ohms
- F: nonflammable

When indicating parts by reference number, please include the board name.

REF. NO.	PART NO.	DESCRIPTION		REMA	RK	REF. NO.	PART NO.	DESCRIPTION		REMA	<u>RK</u>
Α						C062 C065 C070 C080	1-164-161-11 1-163-009-11 1-163-259-91 1-164-005-11	CERAMIC CERAMIC CERAMIC CERAMIC	0.0022μF 0.001μF 220PF 0.47μF	10% 10% 5%	50V 50V 50V 25V
*	A-1298-901-A A-1298-841-A	A BOARD, CO A BOARD, CO				C081	1-164-005-11	CERAMIC	0.47µF		25V
*	A-1298-939-A A-1298-940-A A-1298-941-A	A BOARD, CO	OMPLETE (K' OMPLETE (K'	V-29SL42 V-29SL42	2K) 2T/XL42T)	C091 C092 C101	1-163-231-11 1-163-231-11 1-126-963-11	CERAMIC CERAMIC ELECT	15PF 15PF 4.7μF	5% 5% 20%	50V 50V 50V
	4-382-854-11 4-382-854-11	SCREW (M3X SCREW (M3X				C102 C150	1-126-933-11 1-126-941-11	ELECT ELECT	100μF 470μF	20% 20%	16V 25V
						C151 C200	1-104-664-11 1-126-959-11	ELECT ELECT	47μF 0.47μF	20% 20%	25V 50V
	CAPACITOR	<u>l</u>				C201 C202	1-126-960-11 1-126-960-11	ELECT ELECT	1μF 1μF	20% 20%	50V 50V
C001 C004	1-163-259-91 1-104-664-11	CERAMIC ELECT	220PF 47µF	5% 20%	50V 25V	C207	1-126-959-11	ELECT	1μ1 0.47μF	20%	50V
C005 C006	1-126-960-11 1-163-035-00	ELECT CERAMIC	1μF 0.047μF	20%	50V 50V	C208 C209	1-126-959-11 1-126-963-11	ELECT ELECT	0.47μF 4.7μF	20% 20%	50V 50V
C007	1-163-259-91	CERAMIC	220PF	5%	50V	C211 C212	1-126-964-11 1-126-963-11	ELECT ELECT	4.7μF 10μF 4.7μF	20% 20% 20%	50V 50V 50V
C008 C010	1-163-009-11 1-163-009-11	CERAMIC CERAMIC	0.001μF 0.001μF	10% 10%	50V 50V	C213	1-126-964-11	ELECT	4.7μi 10μF	20%	50V
C011 C012	1-163-009-11 1-163-009-11	CERAMIC CERAMIC	0.001µF 0.001µF	10% 10%	50V 50V	C216	1-126-959-11	ELECT (KV-29SL42K/42	0.47µF T/XI 42T/VI 4	20% 2T/27V42	50V
C014	1-164-004-11	CERAMIC	0.1µF	10%	25V	C217	1-126-959-11	ELECT (KV-29SL42K/SL	0.47µF	20%	50V
C017 C019	1-126-960-11 1-163-135-00	ELECT CERAMIC	1μF 560PF	20% 5%	50V 50V	C218 C219	1-126-941-11 1-130-495-00	ELECT FILM	470μF 0.1μF	20% 5%	25V 50V
C020 C021	1-130-495-00 1-163-259-91	FILM CERAMIC	0.1µF 220PF	5% 5%	50V 50V	C222	1-126-964-11	ELECT	10µF	20%	50V
C028	1-163-005-11	CERAMIC	470PF	10%	50V	C226 C230	1-126-963-11 1-126-957-11	ELECT ELECT	4.7μF 0.22μF	20% 20%	50V 50V
C030 C034	1-163-259-91 1-163-037-11	CERAMIC CERAMIC	220PF 0.022µF	5% 10%	50V 50V	C237	1-126-957-11	(KV-29VL42T/27) ELECT		20%	50V
C037 C038	1-164-161-11 1-126-941-11	CERAMIC ELECT	0.0022μF 470μF	10% 20%	50V 25V	C239	1-137-368-11	(KV-29VL42T/27) FILM	V42) 0.0047μF	5%	50V
C039	1-126-964-11	ELECT	10μF	20%	50V	C240	1-137-368-11	(KV-29VL42T/27) FILM		5%	50V
C046 C047	1-104-664-11 1-163-259-91	ELECT CERAMIC	47μF 220PF	20% 5%	25V 50V	0270	1 101-000-11	(KV-29VL42T/27)		J /0	50 V
C048 C055	1-163-009-11 1-163-251-11	CERAMIC CERAMIC	0.001µF 100PF	10% 5%	50V 50V	C243 C250	1-163-017-00 1-126-960-11	CERAMIC ELECT	0.0047μF 1μF	10% 20%	50V 50V
C060	1-163-005-11	CERAMIC	470PF	10%	50V			(KV-27V66 ONLY			-

The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

Note:



					-						
REF. NO.	PART NO.	DESCRIPTION		REMA	<u>RK</u>	REF. NO.	PART NO.	DESCRIPTION		REMAI	<u>RK</u>
C251	1-126-960-11	ELECT	1µF	20%	50V	C355	1-164-222-11	CERAMIC	.22µF		25V
		(KV-27V66 ONLY	)			C356	1-163-038-91	CERAMIC	0.1µF		25V
C252	1-126-959-11	ELECT	0.47µF	20%	50V	C357	1-163-021-91	CERAMIC	0.01µF	10%	50V
		(KV-27V66 ONLY	)			C358	1-104-664-11	ELECT	47µF	20%	25V
C255	1-104-760-11	CERAMIC	0.047µF	10%	50V	C359	1-163-021-91	CERAMIC	0.01µF	10%	50V
C256	1-126-960-11	ELECT	1μF .	20%	50V				•		
C257	1-126-960-11	ELECT	1μF	20%	50V	C360	1-163-021-91	CERAMIC	0.01µF	10%	50V
			•			C361	1-163-037-11	CERAMIC	0.022µF	10%	50V
C258	1-126-959-11	ELECT	0.47µF	20%	50V	C362	1-126-965-11	ELECT	10μF	20%	50V
C259	1-163-021-91	CERAMIC	0.01µF	10%	50V	C363	1-126-960-11	ELECT	1µF	20%	50V
C280	1-126-935-11	ELECT	470µF	20%	16V	0000	1 120 000 11		. μ.	2070	001
0200	1 120 000 11	(KV-29VL42T/27\		2070		C370	1-163-021-91	CERAMIC	0.01µF	10%	50V
C281	1-126-959-11	ELECT	0.47µF	20%	50V	0010	1 100 021 01	(KV-27V66 ONLY	•	1070	001
0201	1-120-333-11	(KV-29VL42T/27\	•	2070	30 V	C371	1-163-021-91	CERAMIC	0.01µF	10%	50V
C282	1-126-959-11	ELECT	0.47µF	20%	50V	03/1	1-103-021-91	(KV-27V66 ONLY		10 /0	J0 V
G202	1-120-959-11		•	2070	300	C272	1 162 021 01	•	,	100/	50V
		(KV-29VL42T/27\	/42/V00)			C372	1-163-021-91	CERAMIC ONLY	0.01µF	10%	OUV
0004	4 404 004 44	FLECT	47F	200/	25)/			(KV-27V66 ONLY	)		
C284	1-104-664-11	ELECT	47µF	20%	25V	0070	4 400 000 04	OFDAMIO	0.4 5		05) /
C285	1-126-933-11	ELECT	100µF	20%	16V	C373	1-163-038-91	CERAMIC	0.1µF	000/	25V
C286	1-163-251-11	CERAMIC	100PF	5%	50V	C374	1-126-935-11	ELECT	470µF	20%	16V
C287	1-126-959-11	ELECT	0.47µF	20%	50V	C375	1-163-038-91	CERAMIC	0.1µF		25V
C288	1-126-960-11	ELECT	1μF	20%	50V	C376	1-104-664-11	ELECT	47μF	20%	25V
						C377	1-126-964-11	ELECT	10μF	20%	50V
C289	1-126-960-11	ELECT	1μF	20%	50V						
C290	1-164-005-11	CERAMIC	0.47µF		25V	C380	1-163-021-91	CERAMIC	0.01µF	10%	50V
C301	1-163-233-11	CERAMIC	18PF	5%	50V			(KV-29SL42K/SL4	42T/XL42T/V	L42T/27\	/42)
C303	1-126-963-11	ELECT	4.7µF	20%	50V	C381	1-163-021-91	CERAMIC	0.01µF	10%	50V
C304	1-163-038-91	CERAMIC	0.1µF		25V			(KV-29SL42K/SL4	12T/XL42T/V	L42T/27\	/42)
			•			C382	1-163-021-91	CERAMIC	0.01µF	10%	50V
C305	1-164-004-11	CERAMIC	0.1µF	10%	25V			(KV-29SL42K/SL4		L42T/27	/42)
C306	1-164-004-11	CERAMIC	0.1µF	10%	25V			,			,
C307	1-126-964-11	ELECT	10μF	20%	50V	C390	1-126-959-11	ELECT	0.47µF	20%	50V
C308	1-126-964-11	ELECT	10µF	20%	50V	C399	1-126-964-11	ELECT	10µF	20%	50V
C309	1-163-017-00	CERAMIC	0.0047µF	10%	50V	C400	1-126-963-11	ELECT	4.7µF	20%	50V
0000	1 100 017 00	OLIV WIIO	0.00 π μι	1070	001	C401	1-126-956-91	ELECT	0.1µF	20%	50V
C310	1-126-963-11	ELECT	4.7µF	20%	50V	C402	1-163-017-00	CERAMIC	0.0047µF	10%	50V
C311	1-163-021-91	CERAMIC	4.7μ1 0.01μF	10%	50V	0702	1-103-017-00	OLIVAIVIIO	0.00+1μι	10 /0	30 V
C312	1-126-942-61	ELECT	1000μF	20%	25V	C403	1-126-963-11	ELECT	4.7µF	20%	50V
C312		CERAMIC		10%	50V	C403		ELECT		20%	50V 50V
	1-163-021-91		0.01µF				1-126-963-11		4.7µF		
C314	1-163-003-11	CERAMIC	330PF	10%	50V	C405	1-126-963-11	ELECT	4.7µF	20%	50V
0040	4 400 004 04	CEDAMIC	0.04	400/	501/	C406	1-126-963-11	ELECT	4.7μF	20%	50V
C316	1-163-021-91	CERAMIC	0.01µF	10%	50V	C407	1-126-964-11	ELECT	10μF	20%	50V
C317	1-163-021-91	CERAMIC	0.01µF	10%	50V	0440	4 400 000 44	FLEOT	4.7	000/	F0\/
C318	1-163-021-91	CERAMIC	0.01µF	10%	50V	C410	1-126-963-11	ELECT	4.7µF	20%	50V
C319	1-126-963-11	ELECT	4.7µF	20%	50V	C411	1-126-956-91	ELECT	0.1µF	20%	50V
C320	1-126-959-11	ELECT	0.47µF	20%	50V	C412	1-130-495-00	FILM	0.1µF	5%	50V
						C413	1-126-967-11	ELECT	47μF	20%	50V
C321	1-163-133-00	CERAMIC	470PF	5%	50V	C414	1-163-017-00	CERAMIC	0.0047µF		50V
C323	1-163-121-00	CERAMIC	150PF	5%	50V						
C324	1-163-251-11	CERAMIC	100PF	5%	50V	C415	1-126-956-91	ELECT	0.1µF	20%	50V
C331	1-163-009-11	CERAMIC	0.001µF	10%	50V	C416	1-126-963-11	ELECT	4.7µF	20%	50V
C332	1-163-009-11	CERAMIC	0.001µF	10%	50V	C418	1-126-964-11	ELECT	10µF	20%	50V
			•					(KV-29SL42K/SL4			
C350	1-163-021-91	CERAMIC	0.01µF	10%	50V	C501	1-102-112-00	CERAMIC	330PF	10%	50V
C351	1-126-964-11	ELECT	10μF	20%	50V	C502	1-106-383-00	MYLAR	0.047µF	10%	200V
C352	1-163-021-91	CERAMIC	0.01µF	10%	50V			= " '	·· Im.		
C353	1-163-021-31	CERAMIC	0.01μF	.0/0	25V	C503	1-102-212-00	CERAMIC	820PF	10%	500V
C354	1-163-038-91	CERAMIC	0.1μF		25V	C504	1-102-212-00	CERAMIC	680PF	10%	500V
UUU <del>1</del>	17100-030-81	OLIVAIVIIO	υ. ιμι		201	0304	1-102-002-00	OLIVAIVIIO	JUUI F	10/0	J00 V



The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

Note:

REF. NO.	PART NO.	DESCRIPTION		REMA	<u>RK</u>	REF. NO.	PART NO.	DESCRIPTION		REMA	<u>RK</u>
C505 △	1-162-134-11	CERAMIC	470PF	10%	2KV	C621	1-136-356-11	FILM	470PF	5%	50V
	1-119-969-11	MYLAR	14000PF	3%	1.5KV	C625	1-164-625-11	CERAMIC	680PF	10%	500V
	1-107-364-11	MYLAR	0.01µF	10%	200V	C626	1-126-933-11	ELECT	100µF	20%	16V
	1-162-116-00	CERAMIC	680PF	10%	2KV	C627	1-164-004-11	CERAMIC	0.1μF	10%	25V
0000 21	1 102 110 00	OLIV WIIO	00011	1070	21(1	0021	1 104 004 11	(KV-27V66 ONLY	•	1070	201
C510	1-107-649-11	ELECT	2.2µF	20%	250V	C629	1-104-665-11	ELECT	΄100μF	20%	25V
C511 △	1-117-673-11	FILM	1.5µF	5%	250V				•		
C512	1-106-395-00	MYLAR	0.15µF	10%	200V	C630	1-124-347-00	ELECT	100μF	20%	160V
C513	1-106-343-00	MYLAR	0.001µF	10%	100V	C631	1-126-944-11	ELECT	3300µF	20%	25V
C514	1-117-891-11	FILM	0.62µF	5%	250V	C633	1-104-341-11	FILM	0.1µF	10%	250V
						C634	1-130-471-00	MYLAR	0.001µF	5%	50V
C515 △	1-162-116-00	CERAMIC	680PF	10%	2KV	C638	1-104-665-11	ELECT	100μF	20%	25V
C520 △	1-129-722-00	FILM	0.047µF	5%	630V						
C521	1-164-646-11	CERAMIC	2200PF	10%	500V	C639	1-125-772-91	CERAMIC	1500PF	10%	2KV
C523	1-107-652-11	ELECT	10µF	20%	250V	C640	1-164-625-11	CERAMIC	680PF	10%	500V
C524	1-102-244-00	CERAMIC	220PF	10%	500V	C641	1-126-943-11	ELECT	2200µF	20%	25V
						C653	1-104-664-11	ELECT	47μF	20%	25V
C525	1-162-815-11	CERAMIC	47PF	5%	500V	C654	1-126-933-11	ELECT	100µF	20%	16V
C526	1-126-960-11	ELECT	1μF	20%	50V			-			
C527	1-126-965-11	ELECT	22µF	20%	50V	C655	1-107-636-11	ELECT	10µF	20%	160V
C528	1-164-690-91	CERAMIC	0.0022µF	5%	50V	C690	1-126-959-11	ELECT	0.47µF	20%	50V
C529	1-164-161-11	CERAMIC	0.0022µF	10%	50V	C691	1-126-941-11	ELECT	470µF	20%	25V
0020	1-10-1-11	OLIVAINIO	0.0022μι	1070	30 V	C692	1-104-664-11	ELECT	47μF	20%	25V
C530	1-163-009-11	CERAMIC	0.001µF	10%	50V	C693	1-137-194-81	FILM	-7 μι 0.47μF	5%	50V
C531	1-106-387-00	MYLAR	0.067µl 0.068µF	10%	200V	C699	1-113-924-11	CERAMIC	0.47µl 0.0047µF	20%	250V
						C099	1-113-924-11	CERAIVIIC	0.0041µF	20%	250 V
C541	1-126-969-11	ELECT	220µF	20%	50V						
C542	1-126-967-11	ELECT	47µF	20%	50V			_			
C543	1-137-194-81	FILM	0.47µF	5%	50V		CONNECTO	<u> </u>			
C553	1-107-662-11	ELECT	22µF	20%	250V	CN101	1-508-786-00	PIN,CONNECTO	R(5MMPITCI	<del>-</del> 1)	
C555	1-163-017-00	CERAMIC	0.0047µF	10%	50V	CN151	1-564-511-11	PLUG,CONNECT	OR 8P (KV-2	7V66 ON	JLY)
C562	1-126-941-11	ELECT	470µF	20%	25V	CN152	1-564-509-11	PLUG,CONNECT	OR 6P (KV-2	7V66 ON	JLY)
C564	1-126-941-11	ELECT	470µF	20%	25V	CN203	1-560-124-00	PLUG, CONNECT	OR(2.5MM)4	ŀΡ	
	1-126-964-11	ELECT	10μF	20%	50V	CN251	1-564-510-11	PLUG, CONNECT	OR 7P (KV-2	7V66 ONI	LY)
<b>5</b> 0 <u></u>			. op						,		
C573	1-126-963-11	ELECT	4.7µF	20%	50V	CN252	1-564-506-11	PLUG,CONNECT			
C574	1-107-635-11	ELECT	4.7µF	20%	160V	CN253	1-564-510-11	PLUG,CONNECT		29VL421/	27V42/V66)
C575 △	1-163-021-91	CERAMIC	0.01µF	10%	50V	CN254	1-564-508-11	PLUG,CONNECT			
C576	1-123-024-21	ELECT	33µF		160V	CN255	1-564-510-11	PLUG,CONNECT			
C581	1-126-963-11	ELECT	4.7μF	20%	50V	CN301	1-564-508-11	PLUG,CONNECT	OR 5P (KV-29	9SL42K/S	SL42T/XL42T)
						CN301	1-564-511-11	PLUG,CONNECT	OR 8P (KV-29	3VL42T/2	7V42/V66)
C591	1-106-357-00	MYLAR	0.0033µF	20%	200V	CN302	1-691-616-11	CONNECTOR,BC			
C601	1-130-495-00	MYLAR	0.1µF	5%	50V	CN401	1-564-505-11	PLUG,CONNECT		(111	
C602	1-126-967-11	ELECT	47μF	20%	50V	CN402	1-564-505-11	PLUG,CONNECT			
C609	1-126-968-11	ELECT	100µF	20%	50V	CN501	1-580-798-11	CONNECTORPIN			
C610	1-126-964-11	ELECT	10μF	20%	50V	ONOUT	1-000-130-11	OOMINEO FOINTII	1(01)01		
0040 +	4 400 740 44	FLECT	FC0F	000/	400)/	CN502	1-564-509-11	PLUG,CONNECT			
C613 <u>∧</u>	1-128-718-11	ELECT	560µF	20%	400V	CN601	1-580-843-11	PIN,CONNECTO			
0011	4 400 001 11	(KV-29SL42K/SL				CN602	1-508-786-00	PIN,CONNECTO	*	H)	
C614	1-126-964-11	ELECT	10μF	20%	50V	CN604	1-564-506-11	PLUG,CONNECT	OR 3P		
C615	1-113-924-11	CERAMIC	0.0047µF	20%	250V						
C616	1-130-202-00	FILM	0.022µF	10%	400V						
C617	1-107-824-11	(KV-29SL42K ON CERAMIC	ILY) 220PF	5%	1KV		DIODE				
0017	1-10/-024-11			J/0	11/1/	D004		DIODE MITTE	10		
		(KV-29SL42K ON	ı∟ĭ <i>)</i>			D001	8-719-921-44	DIODE MTZJ-5.1			
0010	4 405 000 44	гим	COODE	20/	1.51/1	D002	8-719-070-80	DIODE LNK0120			
C618	1-125-893-11	FILM	680PF	3%	1.5KV	Boss	0.740.621.25	(KV-29SL42K/29S			
C620	1-164-081-11	CERAMIC	470PF	10%	50V	D003	8-719-991-33	DIODE 15	SS133T-77		

The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

# Note:



REF. NO.	PART NO.	DESCRIPTION	<u>N REMARK</u>	REF. NO.	PART NO.	DESCRIPTIO	<u>REMARK</u>
D004	8-719-991-33	DIODE	1SS133T-77	D606	8-719-108-18	THYRISTOR	5P6M
D005	8-719-109-89	DIODE	RD5.6ESB2	D607	8-719-991-33	DIODE	1SS133T-77
D201	8-719-110-17	DIODE	RD10ESB2	D608	8-719-110-53	DIODE	RD20ESB2
D202	8-719-110-17	DIODE	RD10ESB2	D609	8-719-311-31	DIODE	RU-1P (KV-29SL42K/29VL42T)
D204	8-719-110-17	DIODE	RD10ESB2				,
				D610	8-719-510-02		D1NS4
D205	8-719-982-22	DIODE	MTZJ-30D	D611	8-719-063-70		D1NL20U
D207	8-719-109-66	DIODE	RD3.3ESB2	D612	8-719-110-17		RD10ESB2
D208	8-719-110-17	DIODE	RD10ESB2	D613	8-719-063-70		D1NL20U
			(/SL42T/XL42T/VL42T/27V42)	D614	8-719-063-70	DIODE	D1NL20U
D208	8-719-982-96	DIODE	MTZJ-T-77-2.2A (KV-27V66 ONLY)				
D250	8-719-108-12	DIODE	RD9.1EW	D615	8-719-312-10		RU4AM-T3
				D617	8-719-510-37		D5LC20U
D251	8-719-108-12	DIODE	RD9.1EW	D620	8-719-110-17		RD10ESB2
D252	8-719-110-17	DIODE	RD10ESB2	D630	8-719-510-37		D5LC20U
D253	8-719-110-17	DIODE	RD10ESB2	D640	8-719-991-33		1SS133T-77
D254	8-719-110-17	DIODE	RD10ESB2	D650	8-719-109-89	DIODE	RD5.6ESB2
D255	8-719-110-17	DIODE	RD10ESB2				
D280	8-719-981-99	DIODE	MTZJ-3.3		FERRITE BI	ΞΑD	
		(KV-29VL42T	7/27V42/27V66)				
D281	8-719-981-99	DIODE	MTZJ-3.3	FB350	1-216-295-91		
			7/27V42/27V66)	FB501	1-410-396-41		0μΗ
D302	8-719-921-44	DIODE	MTZJ-5.1C	FB521	1-410-397-21		1.1µH
D303	8-719-991-33	DIODE	1SS133T-77	FB522	1-410-397-21		1.1µH
D304	8-719-991-33	DIODE	1SS133T-77	FB600 FB601	1-412-911-11 1-412-911-11	FERRITE FERRITE	0μH 0μH
D305	8-719-991-33	DIODE	1SS133T-77	1 2001		LIMMIL	ομι ι
D306	8-719-991-33	DIODE	1SS133T-77	FB602	1-412-911-11	FERRITE	0μΗ
D388	8-719-921-44	DIODE	MTZJ-5.1C	FB603	1-412-911-11	FERRITE	0μΗ
D403	8-719-991-33	DIODE	1SS133T-77	FB604	1-412-911-11	FERRITE	0μΗ
		(KV-29SL42K	(/29SL42T/XL42T/29VL42T/27V42)	FB605	1-412-911-11	FERRITE	0μH
D501	8-719-945-80	DIODE	ERC06-15S	FB606	1-412-911-11	FERRITE	0μH
D502	0 710 000 02	DIODE	GP08D	FB609	1-412-911-11	FERRITE	0μΗ
D502	8-719-908-03 8-719-908-03	DIODE	GP08D				
D503	8-719-067-63	DIODE	MDV04-600RL		10		
D520 D521	8-719-302-43		EL1Z		<u>IC</u>		
D521	8-719-991-33		1SS133T-77	IC001	8-759-562-90	IC M37273MF	F-251SP
DUZZ	0-7 13-33 1-33	DIODE	1331331-77	IC002	8-759-575-47	IC NJM78LR0	05BM-TE2
D523	8-719-991-33	DIODE	1SS133T-77	IC003	8-759-527-75	IC M24C04-N	IN6T
D525 D541	8-719-991-33	DIODE	GP08D	IC004	8-742-014-11	HYB IC SBX1	1981-51 (KV-29SL42K/29SL42T/XL42T)
D550	8-719-110-08	DIODE	RD8.2ESB2	IC010	8-759-450-93		,
D550 D551	8-719-991-33	DIODE	1SS133T-77				
D552	8-719-302-43	DIODE	EL1Z	IC202	8-759-100-96	IC NJM4558N	Л-TE2
DUUZ	0-7 13-302-43	DIODE	CLIZ	IC203	8-759-366-77		
D561	8-719-979-85	DIODE	EGP20G	10000	0.750.75	,	(/29SL42T/XL42T/29VL42T/27V42)
D562	8-719-979-85	DIODE	EGP20G	IC203	8-759-534-81		D (KV-27V66 ONLY)
D571 △	8-719-991-33	DIODE	1SS133T-77	IC301	8-752-090-39	IC CXA2133S	
D572	8-719-991-33	DIODE	1SS133T-77	IC302	8-752-385-80	IC CXD2073S	
D573	8-719-110-08	DIODE	RD8.2ESB2	IC401	8-759-490-17	IC TDA7057A	NQ/N2
D574	8-719-302-43	DIODE	EL1Z			(KV-29SL42K	//29SL42T/XL42T/29VL42T/27V42)
	8-719-991-33	DIODE	1SS133T-77	IC402	8-752-072-39		
D602	8-719-991-33	DIODE	1SS133T-77	IC521	8-759-700-07		Л-TE2
D603	8-719-982-26	DIODE	MTZJ-33B	IC541	8-759-980-58		
D604	8-719-028-72	DIODE	RGP02-17EL-6433				6 (KV-29SL42K ONLY)
D605	8-719-510-53	DIODE	D4SB60L	IC601 △	8-749-015-61		
				I		(KV-29SL42T	/XL42T/29VL42T/27V42/27V66)



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#### Note:

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C602 △	8-749-920-61	IC SE135N-LF12		Q080	8-729-422-27	TRANSISTOR	2SD601A-Q
C604	8-759-198-03	IC PQ09RF21		2000	- · <del> · ·</del>	(KV-29VL42T/27V4	
				Q082	8-729-422-27	,	2SD601A-Q
				Q083	8-729-422-27		2SD601A-Q
	<b>JACK</b>			Q101	8-729-422-27		2SD601A-Q
	JACK			Q170			2SD601A-Q
J200	1-774-750-21	JACK BLOCK,PI	N 2P	Q200	8-729-422-27		2SD601A-Q
J201	1-774-751-11	TERMINAL BLO	CK,S	~~~	0 0		
J202	1-774-749-11	JACK BLOCK,PI	N	Q201	8-729-422-27	TRANSISTOR	2SD601A-Q
		(KV-29VL42T/27	V42/27V66)	Q203			2SA1162-G
J204	1-774-749-11	JACK BLOCK,PI	N	Q280			2SA1162-G
		(KV-29VL42T/27	V42/27V66)	Q200	0 720 210 22	(KV-29VL42T/27V4	
		•	,	Q281	8-729-216-22	•	2SA1162-G
				Q201	0-723-210-22	(KV-29VL42T/27V	
	CHIP COND	HCTOR		Q282	8-729-216-22	,	2SA1162-G
	CHIP COND	OCTOR		Q202	0-729-210-22		
JR003	1-216-295-91	SHORT				(KV-29VL42T/27V4	12/21 V00)
				Q283	8-729-422-27	TRANSISTOR	2SD601A-Q
				Q203	0-129-422-21		
	COIL			0004	0.700.400.07	(KV-29VL42T/27V	•
	OOIL			Q284	8-729-422-27		2SD601A-Q
_001	1-414-267-11	INDUCTOR	10μH	0005	0.700.400.07	(KV-29VL42T/27V4	•
_002	1-414-273-11	INDUCTOR	100μH	Q285	8-729-422-27		2SD601A-Q
_003	1-414-273-11	INDUCTOR	100µH			(KV-29VL42T/27V4	•
_101	1-414-267-11	INDUCTOR	10μH	Q286			2SA1162-G
_150	1-414-273-11	INDUCTOR	100µH	Q287	8-729-216-22	TRANSISTOR	2SA1162-G
			•	0000	0.700.400.07	TDANGIOTOD	0000044.0
_151	1-414-267-11	INDUCTOR	10µH	Q288			2SD601A-Q
_301	1-414-271-11	INDUCTOR	47μH				2SD601A-Q
_302	1-414-267-11	INDUCTOR	10µH	Q302	8-729-422-27		2SD601A-Q
_350	1-414-267-11	INDUCTOR	10µH	Q305			2SA1162-G
_351	1-414-271-11	INDUCTOR	47μH	Q306	8-729-216-22	TRANSISTOR	2SA1162-G
			·	0007	0.700.040.00	TDANGIOTOD	0044400
_501 △	1-411-976-11	COIL,HORIZON	TAL LINEARITY	Q307			2SA1162-G
_502	1-412-552-11	INDUCTOR	2.2µH	Q308			2SA1162-G
_503	1-406-677-11	INDUCTOR	10µH	Q309			2SA1162-G
_504	1-412-533-21	INDUCTOR	47μH	Q310			2SA1162-G
520	1-409-955-11	INDUCTOR	8μH	Q349	8-729-120-28		2SC1623-L5L6
			·			(KV-29SL42K/27V6	66/29VL42T)
_591 △	1-412-528-61	INDUCTOR	18µH	0040	0.700.400.07	TDANGIOTOD	0000044.0
_601	1-412-529-11	INDUCTOR	22µH	Q349	8-729-422-27		2SD601A-Q
_642	1-412-529-11	INDUCTOR	22µH			(KV-29SL42T/XL42	•
_643	1-412-525-31	INDUCTOR	10μΗ	Q350	8-729-216-22		2SA1162-G
			•	Q351	8-729-422-27		2SD601A-Q
				Q352	8-729-216-22		2SA1162-G
	PHOTOCOU	PI FR		Q353	8-729-216-22	TRANSISTOR	2SA1162-G
	111010000	1 LLIX					
³H600 △	8-749-010-64	PHOTO COUPLI	ER PC123F2	Q354	8-729-216-22		2SA1162-G
				Q355	8-729-422-27		2SD601A-Q
				Q356	8-729-216-22		2SA1162-G
	IC LINK			Q357	8-729-216-22		2SA1162-G
				Q358	8-729-422-27	TRANSISTOR	2SD601A-Q
2S201 <u>∧</u>	. 1-532-984-11	LINK,IC 2A/90V	0	<b>A</b> 5==	0 =00 01 = =	TD 411010TC	0014400
		(KV-29SL42K/29	SL42T/XL42T/29VL42T/27V42)	Q359	8-729-216-22		2SA1162-G
				Q360	8-729-216-22		2SA1162-G
				I 0261	8-729-422-27	TRANSISTOR	00000440
				Q361			2SD601A-Q
	TRANSISTO	ıR		Q390	8-729-422-27		2SD601A-Q 2SD601A-Q
	TRANSISTO						2SD601A-Q
2001	TRANSISTO 8-729-216-22	TRANSISTOR	2SA1162-G			TRANSISTOR (KV-29VL42T/27V4	2SD601A-Q

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Note:



REF. NO.	PART NO.	DESCRIPTION		REMA	<u>RK</u>	REF. NO.	PART NO.	DESCRIPTION		REMAR	<u>K</u>
Q501	8-729-140-50	TRANSISTOR	2SC3209LK			R038	1-216-049-91	RES,CHIP	1K	5%	1/10W
Q502	8-729-043-43	TRANSISTOR	2SC5426-01								
Q521	8-729-422-27	TRANSISTOR	2SD601A-Q			R039	1-216-295-91	SHORT			
						R040	1-249-413-11	CARBON	470	5%	1/4W
Q522	8-729-809-29	TRANSISTOR	2SC4159-E			R041	1-216-033-00	RES,CHIP	220	5%	1/10W
Q550	8-729-422-27	TRANSISTOR	2SD601A-Q			R043	1-216-049-91	RES,CHIP	1K	5%	1/10W
Q555	8-729-422-27	TRANSISTOR	2SD601A-Q			R044	1-247-815-91	CARBON	220	5%	1/4W
	8-729-200-17	TRANSISTOR	2SA1091-O								
Q601	8-729-922-37	TRANSISTOR	2SD2144S-U	JVW		R045	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
						R046	1-247-815-91	CARBON	220	5%	1/4W
Q602	8-729-119-78	TRANSISTOR	2SC2785-HF	F		R047	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
Q603	8-729-119-76	TRANSISTOR	2SA1175-HF			R048	1-216-025-91	RES,CHIP	100	5%	1/10W
Q604	8-729-119-78	TRANSISTOR	2SC2785-HF			11040	1 2 10 020 01	IXEO,OI III	100	<b>3</b> 70	1/ 10 1 1
Q607	8-729-922-37	TRANSISTOR	2SD2144S-U			R049	1-216-089-91	RES,CHIP	47K	5%	1/10W
						I		RES,CHIP	47K 10K		1/10W
Q610	8-729-119-78	TRANSISTOR	2SC2785-HF	·E		R050	1-216-073-00	•		5%	
				_		R051	1-216-033-00	RES,CHIP	220	5%	1/10W
Q630	8-729-119-78	TRANSISTOR	2SC2785-HF	·E		R052	1-216-033-00	RES,CHIP	220	5%	1/10W
Q650	8-729-111-55	TRANSISTOR	2SD1312-K			R054	1-216-073-00	RES,CHIP	10K	5%	1/10W
						R056	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
	<b>RESISTOR</b>					R057	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
	KEOIOTOK					R058	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R001	1-216-033-00	RES,CHIP	220	5%	1/10W	R060	1-216-295-91	SHORT			
R002	1-216-073-00	RES,CHIP	10K	5%	1/10W	R061	1-216-295-91	SHORT			
R003	1-216-033-00	RES,CHIP	220	5%	1/10W	1,001	1 210 200 01	OHOITH			
R004	1-216-073-00	RES,CHIP	10K	5%	1/10W	R065	1-216-295-91	SHORT			
R005	1-216-295-91	SHORT	1011	070	171011	K005	1-210-290-91	(KV-29SL42K/29S	SL42T/XL42T	)	
						R066	1-216-033-00	RES,CHIP	220	5%	1/10W
R006	1-216-295-91	SHORT				R069	1-247-815-91	CARBON	220	5%	1/4W
R007	1-216-025-91	RES,CHIP	100	5%	1/10W	R070	1-249-425-11	CARBON	4.7K	5%	1/4W
R008	1-216-033-00	RES,CHIP	220	5%	1/10W	R071	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R010	1-216-033-00	RES,CHIP	220	5%	1/10W	1071	1-210-000-31	INEO,OI III	7.710	J /0	1/1044
R011	1-216-033-00	RES,CHIP	220	5%	1/10W	R073	1-249-425-11	CARBON	4.7K	5%	1/4W
11011	1 210 000 00	rec,orm	220	070	1/1011	1					
R013	1-216-081-00	RES,CHIP	22K	5%	1/10W	R074	1-216-073-00	RES,CHIP	10K	5%	1/10W
R016	1-216-041-00	RES,CHIP	470	5%	1/10W	R075	1-216-073-00	RES,CHIP	10K	5%	1/10W
						R076	1-216-121-91	RES,CHIP	1M	5%	1/10W
R017	1-216-113-00	RES,CHIP	470K	5%	1/10W	R077	1-216-097-91	RES,CHIP	100K	5%	1/10W
R018	1-216-049-91	RES,CHIP	1K	5%	1/10W						
R019	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R080	1-247-863-91	CARBON	22K	5%	1/4W
R020	1-216-069-00	RES,CHIP	6.8K	5%	1/10W	Dooo	4 040 070 00	(KV-29VL42T/27\	,	F0/	4/40\\\
11020	1-210-003-00	(KV-29SL42K/29S			1/1044	R082	1-216-073-00	RES,CHIP	10K	5%	1/10W
D004	1 040 445 44	•			4/4\\			(KV-29VL42T/27\	,		
R021	1-249-415-11	CARBON	680	5%	1/4W	R083	1-216-041-00	RES,CHIP	470	5%	1/10W
		(KV-29SL42K/29S						(KV-29VL42T/27\	/42/27V66)		
R022	1-249-416-11	CARBON	820	5%	1/4W	R084	1-249-429-11	CARBON	10K	5%	1/4W
		(KV-29SL42K/29S	,					(KV-29VL42T/27\	/42/27V66)		
R023	1-216-057-00	RES,CHIP	2.2K	5%	1/10W				•		
		(KV-29SL42K/29S	SL42T/XL42T)			R085	1-216-049-91	RES,CHIP	1K	5%	1/10W
						R086	1-216-045-00	RES,CHIP	680	5%	1/10W
R025	1-249-426-11	CARBON	5.6K	5%	1/4W	R087	1-216-045-00	RES,CHIP	680	5%	1/10W
R026	1-249-426-11	CARBON	5.6K	5%	1/4W	R088	1-216-045-00	RES,CHIP	680	5%	1/10W
R027	1-249-426-11	CARBON	5.6K	5%	1/4W	R090	1-249-429-11	CARBON	10K	5%	1/4W
R028	1-216-049-91	RES,CHIP	1K	5%	1/10W	11000	ı <u>८</u> ⊤७⁻ <b>न८७</b> ⁻Ⅱ	(KV-29SL42K/29S			1/ <b>TVV</b>
R031	1-216-045-00	RES,CHIP	680	5%	1/10W			(IVV-230L42IV293	)L42  //\L42	,	
R032	1-247-815-91	CARBON	220	5%	1/4W	DOG	4 040 070 00	חבר כו יים	401/	F0/	4/40\4
						R091	1-216-073-00	RES,CHIP	10K	5%	1/10W
R033	1-247-815-91	CARBON	220	5% 5%	1/4W	R092	1-216-073-00	RES,CHIP	10K	5%	1/10W
R034	1-216-033-00	RES,CHIP	220	5%	1/10W	R095	1-216-073-00	RES,CHIP	10K	5%	1/10W
R035	1-216-033-00	RES,CHIP	220	5%	1/10W	R096	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
						1					



The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

Note:

REF. NO.	PART NO.	DESCRIPTION		REMAR	<u>K</u>	REF. NO.	PART NO.	DESCRIPTION		REMAR	<u>K</u>
R097	1-216-049-91	RES,CHIP	1K	5%	1/10W	R236	1-249-421-11	CARBON (KV-29SL42K/29S	2.2K L42T/XL42T)	5%	1/4W
R101	1-216-073-00	RES,CHIP	10K	5%	1/10W			•			
R120	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	R236	1-249-426-11	CARBON	5.6K	5%	1/4W
R121	1-216-073-00	RES,CHIP	10K		1/10W			(KV-29VL42T/27V			
R150	1-216-025-91	RES,CHIP	100		1/10W	R237	1-216-069-00		6.8K	5%	1/10W
R151	1-216-025-91	RES,CHIP	100		1/10W	11201	1 210 000 00	(KV-29VL42T/27V		070	.,
1(101	1-210-025-31	INEO,OI III	100	J /0	1/1044	R238	1-216-069-00	*	6.8K	5%	1/10W
R170	1-216-025-91	RES,CHIP	100	5%	1/10W	11230	1-210-003-00	(KV-29VL42T/27V		J /0	1/1000
		,				Door	4 040 005 04	RES,CHIP	,	<b>F</b> 0/	4/40\4/
R171	1-216-049-91	RES,CHIP	1K	5%	1/10W	R239	1-216-065-91	,	4.7K	5%	1/10W
R172	1-216-295-91	SHORT				D040	4 040 005 04	(KV-29VL42T/27V	,	<b>F</b> 0/	4/40\4/
R173	1-216-295-91	SHORT				R240	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R174	1-216-295-91	SHORT	(KV-29SL42k	( ONLY)				(KV-29VL42T/27V	42)		
R175	1-216-295-91	SHORT	(KV-29SL42k	( ONI Y)		R241	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R200	1-216-022-00	RES,CHIP	75	,	1/10W	R242	1-216-083-00	RES,CHIP	27K	5%	1/10W
R201	1-216-022-00	RES,CHIP	470K	5%	1/10W	R242 R243	1-216-689-11	RES,CHIP	39K	5%	1/10W
R201			470K 470K		1/10W	R243 R244		RES,CHIP	1K		1/10W
	1-216-113-00	RES,CHIP					1-216-049-91	,		5% 5%	
R203	1-216-025-91	RES,CHIP	100	5%	1/10W	R245	1-216-049-91	RES,CHIP	1K	5%	1/10W
R204	1-216-043-91	RES,CHIP	560	5%	1/10W	R248	1-216-049-91	RES,CHIP	1K	5%	1/10W
R205	1-216-043-91	RES,CHIP	560		1/10W	R250	1-216-033-00	RES,CHIP	220	5%	1/10W
R207	1-216-025-91	RES,CHIP	100	5%	1/10W	R252	1-216-033-00	RES,CHIP	220	5%	1/10W
R211	1-247-807-31	CARBON	100	5%	1/4W	R253	1-215-899-11	METAL	15K	5%	2W
VZ11	1 247 007 01	(KV-29SL42K/29S			1	R254	1-216-033-00	RES,CHIP	220	5%	1/10W
R212	1-216-065-91	RES,CHIP	4.7K	29VL421/ 5%	1/10W	11204	1-210-033-00	INLO,OI IIF	220	J /0	1/ 1000
<b>NZ IZ</b>	1-210-003-31	(KV-29SL42K/29S				R255	1-216-022-00	RES,CHIP (KV-29VL42T/27V	75 42/27\/66\	5%	1/10W
R213	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	R256	1-216-033-00	RES,CHIP	220	5%	1/10W
		RES,CHIP	470K		1/10W	R257		RES,CHIP			1/10W
R214	1-216-113-00						1-216-073-00		10K	5%	
R215	1-216-033-00	RES,CHIP	220		1/10W	R258	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R216	1-216-113-00	RES,CHIP	470K		1/10W	R259	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R217	1-216-033-00	RES,CHIP	220	5%	1/10W	Daca	4 040 005 04	DEC CUID	100	F0/	4/40\\
D040	4 040 000 00	DEC OUID	0.01/	<b>5</b> 0/	4/40/1/	R260	1-216-025-91	RES,CHIP	100	5%	1/10W
R218	1-216-069-00	RES,CHIP	6.8K		1/10W	R261	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R219	1-216-073-00	RES,CHIP	10K		1/10W	R262	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R220	1-216-073-00	RES,CHIP	10K		1/10W	R263	1-216-033-00	RES,CHIP	220	5%	1/10W
R221	1-216-073-00	RES,CHIP	10K	5%	1/10W	R264	1-216-033-00	RES,CHIP	220	5%	1/10W
R222	1-216-069-00	RES,CHIP	6.8K	5%	1/10W						
						R265	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R223	1-216-073-00	RES,CHIP	10K		1/10W	R266	1-216-065-91		4.7K	5%	1/10W
R224	1-216-073-00	RES,CHIP	10K		1/10W	R267	1-216-022-00		75	5%	1/10W
R225	1-216-073-00	RES,CHIP	10K		1/10W	R269	1-216-049-91		1K	5%	1/10W
R226	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R270	1-216-022-00	RES,CHIP	75	5%	1/10W
R228	1-216-065-91	RES,CHIP	4.7K	5%	1/10W						
		0.1550/:				R271	1-216-113-00	RES,CHIP	470K	5%	1/10W
R231	1-249-421-11	CARBON	2.2K	5%	1/4W	R272	1-216-113-00		470K	5%	1/10W
		(KV-29SL42K/29S				R273	1-216-065-91		4.7K	5%	1/10W
R231	1-249-426-11	CARBON	5.6K	5%	1/4W	R274	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
		(KV-29VL42T/27V	42)			R275	1-216-295-91	SHORT			
R232	1-249-429-11	CARBON	10K	5%	1/4W						
		(KV-29SL42K/29S	L42T/XL42T)			R276	1-216-295-91	SHORT			
R233	1-249-429-11	CARBON	10K	5%	1/4W	R277	1-216-295-91	SHORT			
		(KV-29SL42K/29S				R278	1-216-295-91		(KV-27V66 C	ONLY)	
R234	1-216-063-91	RES,CHIP	3.9K		1/10W	R279	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
	. = . 5 555 61	(KV-29VL42T/27V		2,3		R280	1-247-807-31	CARBON	100	5%	1/4W
	1-216-063-91	RES,CHIP	3.9K	5%	1/10W	11200	1 E 11 OUT-UT	(KV-29VL42T/27V		<b>3</b> / 0	1/ TVV
7235				J /U	1/ 1 🗸 V V V			(11.0-23.0 P45 1/51.0	74141 V UU)		
R235	1-210-003-91	(KV-29VL42T/27V				R281	1-247-807-31	CARBON	100	5%	1/4W

The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

Note:



REE NO	PART NO.	DESCRIPTION		REMAR	SK	REF. NO.	PART NO.	DESCRIPTION		REMAR	ıK
					_						
R282	1-247-807-31	CARBON	100	5%	1/4W	R326	1-216-033-00	RES,CHIP	220	5%	1/10W
Daga	1 246 205 04	(KV-29VL42T/27\	,	ONII V/		R328	1-216-025-91	RES,CHIP	100	5% 5%	1/10W
R283	1-216-295-91	SHORT	(KV-27V66	ONLY)		R329	1-216-025-91	RES,CHIP	100	5%	1/10W
R284	1-260-091-11	CARBON	220	5%	1/2W	R330	1-216-025-91	RES,CHIP	100	5%	1/10W
-		(KV-29VL42T/27\	/42/27V66)			R331	1-216-025-91	RES,CHIP	100	5%	1/10W
R285	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R333	1-216-049-91	RES,CHIP	1K	5%	1/10W
		(KV-29VL42T/27\	/42/27V66)			R334	1-216-025-91	RES,CHIP	100	5%	1/10W
R286	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R335	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
		(KV-29VL42T/27\	/42/27V66)								
R287	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R336	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
		(KV-29VL42T/27\	/42/27V66)			R337	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R288	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R339	1-216-295-91	SHORT			
		(KV-29VL42T/27\	/42/27V66)			R340	1-249-417-11	CARBON	1K	5%	1/4W
						R341	1-216-073-00	RES,CHIP	10K	5%	1/10W
R289	1-216-021-00	RES,CHIP	68	5%	1/10W						
		(KV-29VL42T/27\	/42/27V66)			R342	1-216-069-00	RES,CHIP	6.8K	5%	1/10W
R290	1-216-113-00	RES,CHIP	470K	5%	1/10W	R343	1-208-291-11	RES,CHIP	4.7M	5%	1/10W
		(KV-29VL42T/27\	/42/27V66)			R344	1-216-295-91	SHORT			
R291	1-216-113-00	RES,CHIP	470K	5%	1/10W	R345	1-208-291-11	RES,CHIP	4.7M	5%	1/10W
		(KV-29VL42T/27\	/42/27V66)			R346	1-208-291-11	RES,CHIP	4.7M	5%	1/10W
R292	1-216-113-00	RES,CHIP	470K	5%	1/10W						
		(KV-29VL42T/27\	/42/27V66)			R347	1-216-049-91	RES,CHIP	1K	5%	1/10W
R293	1-216-069-00	RES,CHIP	6.8K	5%	1/10W	R348	1-216-031-00	RES,CHIP	180	5%	1/10W
		(KV-29VL42T/27\	/42/27V66)			R349	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
						R350	1-208-766-11	RES,CHIP	220	0.50%	1/10W
R294	1-216-069-00	RES,CHIP	6.8K	5%	1/10W	R351	1-208-766-11	RES,CHIP	220	0.50%	1/10W
		(KV-29VL42T/27\	,								
R295	1-216-069-00	RES,CHIP	6.8K	5%	1/10W	R352	1-208-794-11	RES,CHIP	3.3K	0.50%	1/10W
		(KV-29VL42/27V	12/27V66)			R353	1-216-295-91	SHORT			
R296	1-249-437-11	CARBON	47K	5%	1/4W	R354	1-208-794-11	RES,CHIP	3.3K	0.50%	1/10W
R297	1-216-043-91	RES,CHIP	560	5%	1/10W	R355	1-216-025-91	RES,CHIP	100	5%	1/10W
R298	1-216-041-00	RES,CHIP	470	5%	1/10W	R356	1-216-059-00	RES,CHIP	2.7K	5%	1/10W
Door	4 040 005 04	DE0 01 IID	4 714	=0/	4/40/4/	D0==	4 040 004 00	DE0 01 IID	=01 <i>(</i>	=0/	4/40144
R299	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R357	1-216-091-00	RES,CHIP	56K	5%	1/10W
R301	1-216-295-91	SHORT	1017	=0/	4/4004/	R358	1-216-043-91	RES,CHIP	560	5%	1/10W
R304	1-216-073-00	RES,CHIP	10K	5%	1/10W	R359	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R305	1-216-033-00	RES,CHIP	220	5%	1/10W	R360	1-216-049-91	RES,CHIP	1K	5%	1/10W
R306	1-208-806-11	RES,CHIP	10K	0.50%	1/10W	R361	1-216-049-91	RES,CHIP	1K	5%	1/10W
R307	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R362	1-216-043-91	RES,CHIP	560	5%	1/10W
R308	1-216-025-91	RES,CHIP	100	5%	1/10W	R363	1-216-037-00	RES,CHIP	330	5%	1/10W
R310	1-216-049-91	RES,CHIP	1K	5%	1/10W	R364	1-216-025-91	RES,CHIP	100	5%	1/10W
R312	1-216-033-00	RES,CHIP	220	5%	1/10W	R365	1-216-025-91	RES,CHIP	100	5%	1/10W
R313	1-216-033-00	RES,CHIP	220	5%	1/10W	R366	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
		0,0		070	,,,,,,,					• , ,	.,
R314	1-216-033-00	RES,CHIP	220	5%	1/10W	R367	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R315	1-216-033-00	RES,CHIP	220	5%	1/10W	R368	1-216-033-00	RES,CHIP	220	5%	1/10W
R316	1-247-807-31	CARBON	100	5%	1/4W	R369	1-216-041-00	RES,CHIP	470	5%	1/10W
R317	1-216-025-91	RES,CHIP	100	5%	1/10W	R370	1-216-033-00	RES,CHIP	220	5%	1/10W
R318	1-216-025-91	RES,CHIP	100	5%	1/10W	R372	1-216-035-00	RES,CHIP	270	5%	1/10W
-		V =				•		V =			
R319	1-216-073-00	RES,CHIP	10K	5%	1/10W	R373	1-216-025-91	RES,CHIP	100	5%	1/10W
R320	1-216-025-91	RES,CHIP	100	5%	1/10W	R374	1-216-025-91	RES,CHIP	100	5%	1/10W
R321	1-216-025-91	RES,CHIP	100	5%	1/10W	R375	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R322	1-216-025-91	RES,CHIP	100	5%	1/10W	R376	1-216-049-91	RES,CHIP	1K	5%	1/10W
R323	1-216-037-00	RES,CHIP	330	5%	1/10W	R377	1-216-049-91	RES,CHIP	1K	5%	1/10W
R324	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R378	1-216-033-00	RES,CHIP	220	5%	1/10W
R325	1-216-022-00	RES,CHIP	75	5%	1/10W						
					52						



The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

Note:

The components identified by 

in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding x-ray radiation. Should replacement be required, replace only with the value originally used.

R380   1-208-790-11   RES,CHIP   2.2K   0.50%   1/10W   R532   1-215-437-00   METAL   4.7K   1%   1	1/10W 1/4W 1/4W 1/4W 1/4W 1/4W 1/4W 1/4W 1/4W 1/4W 1/4W 1/4W 1/4W 1/4W 1/4W 1/4W
R381         1-216-053-00         RES,CHIP         1.5K         5%         1/10W         R533         1-215-461-00         METAL         47K         1%         1           R383         1-216-017-91         RES,CHIP         47         5%         1/10W         R535         1-249-441-11         CARBON         100K         5%         1           R384         1-216-079-91         RES,CHIP         100K         5%         1/10W         R535         1-249-441-11         CARBON         100K         5%         1           R385         1-216-073-00         RES,CHIP         10K         5%         1/10W         R541         1-249-430-11         CARBON         10K         5%         1           R386         1-216-065-91         RES,CHIP         3.3K         5%         1/10W         R542         1-249-439-11         CARBON         10K         5%         1           R390         1-249-417-11         CARBON         1K         5%         1/4W         R546         ∆         1-216-351-00         METAL         470         5%         1           R391         1-216-073-00         RES,CHIP         10K         5%         1/10W         R547         ∆         1-249-385-11         CARBON <td>1/4W 1/4W 1/4W 1/4W 1/4W 1/4W 1/4W 1/4W</td>	1/4W 1/4W 1/4W 1/4W 1/4W 1/4W 1/4W 1/4W
R381       1-216-053-00       RES,CHIP       1.5K       5%       1/10W       R533       1-215-461-00       METAL       47K       1%       1         R383       1-216-017-91       RES,CHIP       47       5%       1/10W       R535       1-249-441-11       CARBON       100K       5%       1         R384       1-216-079-91       RES,CHIP       100K       5%       1/10W       R535       1-249-441-11       CARBON       100K       5%       1         R385       1-216-073-00       RES,CHIP       10K       5%       1/10W       R541       1-249-430-11       CARBON       12K       5%       1         R387       1-216-065-91       RES,CHIP       4.7K       5%       1/10W       R543       1-249-429-11       CARBON       10K       5%       1         R390       1-249-417-11       CARBON       1K       5%       1/4W       R546       ∆       1-216-351-00       METAL       470       5%       1         R391       1-216-073-00       RES,CHIP       10K       5%       1/10W       R547       ∆       1-249-385-11       CARBON       12K       5%       1         R392       1-216-049-91       RES,CHIP <td< td=""><td>1/4W 1/4W 1/4W 1/4W 1/4W 1/W 2W 1/4W 1/4W 1/4W 1/4W 1/4W</td></td<>	1/4W 1/4W 1/4W 1/4W 1/4W 1/W 2W 1/4W 1/4W 1/4W 1/4W 1/4W
R534 1-215-451-00 METAL 18K 1% 18R33 1-216-017-91 RES,CHIP 47 5% 1/10W R535 1-249-441-11 CARBON 100K 5% 170W R535 1-249-441-11 CARBON 10K 5% 170W R535 1-249-441-11 CARBON 10K 5% 170W R535 1-216-033-00 RES,CHIP 10K 5% 1/10W R541 1-249-430-11 CARBON 10K 5% 170W R543 1-249-429-11 CARBON 10K 5% 170W R544 △ 1-216-351-00 METAL 1.5 5% 170W R543 1-249-430-11 CARBON 10K 5% 170W R543 1-249-439-11 CARBON 10K 5% 170W R543 1-249-439-11 CARBON 10K 5% 170W R544 △ 1-216-351-00 METAL 1.5 5% 170W R543 1-249-439-11 CARBON 10K 5% 170W R543 1-249-439-11 CARBON 10K 5% 170W R543 1-249-439-11 CARBON 12K 5% 170W R543 1-249-439-11 CARBON 12K 5% 170W R543 1-249-439-11 CARBON 12K 5% 170W R543 1-249-429-11 CARBON 12K 5% 170W R543 1-249-439-11 CARBON 12K 5% 170W R543 1-249-429-11 CARBON 12K 5% 170W R543 1-249-429-11 CARBON 12K 5% 170W R543 1-249-429-11 CARBON 12K 5% 170W R550 1-216-061-00 RES,CHIP 3.3K 5% 170W R550 1-216-061-00 RES,CHIP 3.3K 5% 170W R551 1-249-413-11 CARBON 470 5% 170W R551 1-249-431-11 CARBON 470 5% 170W R	1/4W 1/4W 1/4W 1/4W 1/4W 1/W 2W 1/4W 1/4W 1/4W 1/4W 1/4W
R383         1-216-017-91         RES,CHIP         47         5%         1/10W         R535         1-249-441-11         CARBON         100K         5%         1           R384         1-216-097-91         RES,CHIP         100K         5%         1/10W         R541         1-249-430-11         CARBON         12K         5%         1           R386         1-216-061-00         RES,CHIP         3.3K         5%         1/10W         R542         1-249-429-11         CARBON         10K         5%         1           R387         1-216-065-91         RES,CHIP         4.7K         5%         1/10W         R542         1-249-429-11         CARBON         10K         5%         1           R387         1-216-065-91         RES,CHIP         4.7K         5%         1/10W         R543         1-249-429-11         CARBON         10K         5%         1           R390         1-249-417-11         CARBON         1K         5%         1/4W         R544         Δ. 1-216-351-00         METAL         470         5%         1           R391         1-216-073-00         RES,CHIP         10K         5%         1/10W         R547         Δ. 1-249-385-11         CARBON         12K	1/4W 1/4W 1/4W 1/4W 1/4W 1/4W 1/4W 1/10W 1/4W 1/4W
R384       1-216-097-91       RES,CHIP       100K       5%       1/10W       R541       1-249-430-11       CARBON       12K       5%       1         R385       1-216-0673-00       RES,CHIP       10K       5%       1/10W       R541       1-249-430-11       CARBON       12K       5%       1         R386       1-216-065-91       RES,CHIP       3.3K       5%       1/10W       R542       1-249-429-11       CARBON       10K       5%       1         R387       1-216-065-91       RES,CHIP       4.7K       5%       1/10W       R543       1-249-429-11       CARBON       10K       5%       1         R390       1-249-417-11       CARBON       1K       5%       1/10W       R546       ∆       1-215-890-11       METAL       1.5       5%       1         R391       1-216-073-00       RES,CHIP       10K       5%       1/10W       R547       ∆       1-249-385-11       CARBON       2.2       5%       1         R392       1-216-049-91       RES,CHIP       1K       5%       1/10W       R549       1-249-385-11       CARBON       10K       5%       1         R394       1-216-049-91       RES,CHIP <t< td=""><td>1/4W 1/4W 1/4W 1/4W 2W 1/4W 1/4W 1/10W 1/4W 1/4W</td></t<>	1/4W 1/4W 1/4W 1/4W 2W 1/4W 1/4W 1/10W 1/4W 1/4W
R385         1-216-073-00         RES,CHIP         10K         5%         1/10W         R541         1-249-430-11         CARBON         12K         5%         1           R386         1-216-061-00         RES,CHIP         3.3K         5%         1/10W         R542         1-249-429-11         CARBON         10K         5%         1           R387         1-216-065-91         RES,CHIP         4.7K         5%         1/10W         R543         1-249-429-11         CARBON         10K         5%         1           R390         1-249-417-11         CARBON         1K         5%         1/4W         R546         ∆         1-216-351-00         METAL         1.5         5%         1           R391         1-216-073-00         RES,CHIP         10K         5%         1/10W         R547         ∆         1-249-385-11         CARBON         2.2         5%         1           R391         1-216-073-00         RES,CHIP         10K         5%         1/10W         R549         1-249-385-11         CARBON         2.2         5%         1           R392         1-216-049-91         RES,CHIP         1K         5%         1/10W         R549         1-249-430-11         CARBON	1/4W 1/4W 1W 2W 1/4W 1/4W 1/10W 1/4W 1/4W
R386       1-216-061-00       RES,CHIP       3.3K       5%       1/10W       R542       1-249-429-11       CARBON       10K       5%       1         R387       1-216-065-91       RES,CHIP       4.7K       5%       1/10W       R543       1-249-429-11       CARBON       10K       5%       1         R390       1-249-417-11       CARBON       1K       5%       1/4W       R546       △ 1-215-890-11       METAL       1.5       5%       1         R391       1-216-073-00       RES,CHIP       10K       5%       1/10W       R547       △ 1-249-385-11       CARBON       2.2       5%       1         R392       1-216-049-91       RES,CHIP       1K       5%       1/10W       R549       1-249-430-11       CARBON       10K       5%       1         R394       1-216-049-91       RES,CHIP       1K       5%       1/10W       R550       1-216-061-00       RES,CHIP       3.3K       5%       1         R395       1-216-049-91       RES,CHIP       220       5%       1/10W       R551       1-249-413-11       CARBON       470       5%       1         R395       1-216-049-91       RES,CHIP       1K       5%	1/4W 1/4W 1W 2W 1/4W 1/4W 1/10W 1/4W 1/4W
R387         1-216-065-91         RES,CHIP         4.7K         5%         1/10W         R543         1-249-429-11         CARBON         10K         5%         1           R390         1-249-417-11         CARBON         1K         5%         1/4W         R546         △         1-216-351-00         METAL         1.5         5%         1           R391         1-249-417-11         CARBON         1K         5%         1/10W         R546         △         1-215-890-11         METAL         470         5%         2           R391         1-216-073-00         RES,CHIP         10K         5%         1/10W         R547         △         1-249-385-11         CARBON         2.2         5%         1           R392         1-216-049-91         RES,CHIP         1K         5%         1/10W         R549         1-249-430-11         CARBON         10K         5%         1           R394         1-216-033-00         RES,CHIP         220         5%         1/10W         R551         1-249-413-11         CARBON         470         5%         1           R395         1-216-049-91         RES,CHIP         1K         5%         1/10W         R552         1-247-887-00 <td< td=""><td>1/4W 1W 2W 1/4W 1/4W 1/4W 1/10W 1/4W</td></td<>	1/4W 1W 2W 1/4W 1/4W 1/4W 1/10W 1/4W
R390 1-249-417-11 CARBON 1K 5% 1/4W (KV-29VL42T/27V42/27V66)  R391 1-216-073-00 RES,CHIP 10K 5% 1/10W R547 △ 1-249-385-11 CARBON 2.2 5% 1 (KV-29VL42T/27V42/27V66)  R392 1-216-049-91 RES,CHIP 1K 5% 1/10W R549 1-249-430-11 CARBON 12K 5% 1 (KV-29VL42T/27V42/27V66)  R394 1-216-033-00 RES,CHIP 220 5% 1/10W R551 1-249-413-11 CARBON 470 5% 1 (KV-29VL42T/27V42/27V66)  R395 1-216-049-91 RES,CHIP 1K 5% 1/10W R551 1-249-413-11 CARBON 470 5% 1 (KV-29VL42T/27V42/27V66)  R395 1-216-049-91 RES,CHIP 1K 5% 1/10W R551 1-249-413-11 CARBON 470 5% 1 (KV-29VL42T/27V42/27V66)  R399 1-216-049-91 RES,CHIP 1K 5% 1/10W R553 △ 1-260-312-11 CARBON 47 5% 1 R554 1-216-101-00 RES,CHIP 150K 5% 1 R554 1-216-101-00 RES,CHIP 150K 5% 1 R554 1-216-081-00 RES,CHIP 22K 5% 1/10W R555 1-216-083-91 RES,CHIP 22K 5% 1/10W R556 1-216-081-00 RES,CHIP 22K 5% 1/10W R556 1-216-081-00 RES,CHIP 22K 5% 1/10W R557 1-249-431-11 CARBON 15K 5% 1 R402 1-216-121-91 RES,CHIP 1M 5% 1/10W R557 1-249-431-11 CARBON 15K 5% 1 R403 1-216-033-00 RES,CHIP 220 5% 1/10W R555 1-216-085-91 RES,CHIP 4.7K 5% 1 R403 1-216-033-00 RES,CHIP 220 5% 1/10W R558 1-216-065-91 RES,CHIP 4.7K 5% 1 R403 1-216-033-00 RES,CHIP 220 5% 1/10W R558 1-216-065-91 RES,CHIP 4.7K 5% 1	1W 2W 1/4W 1/4W 1/10W 1/4W 1/4W
R390       1-249-417-11       CARBON (KV-29VL42T/27V42/27V66)       1/4W (KV-29VL42T/27V42/27V66)       R546 ▲ 1-215-890-11       METAL       470       5%       2         R391       1-216-073-00       RES,CHIP       10K       5%       1/10W       R547 ▲ 1-249-385-11       CARBON       2.2       5%       1         R391       1-216-049-91       RES,CHIP       10K       5%       1/10W       R548       1-249-385-11       CARBON       12K       5%       1         R392       1-216-049-91       RES,CHIP       1K       5%       1/10W       R549       1-249-413-11       CARBON       10K       5%       1         R394       1-216-033-00       RES,CHIP       220       5%       1/10W       R550       1-216-061-00       RES,CHIP       3.3K       5%       1         R395       1-216-049-91       RES,CHIP       1K       5%       1/10W       R552       1-247-887-00       CARBON       220K       5%       1         R395       1-216-049-91       RES,CHIP       1K       5%       1/10W       R552       1-247-887-00       CARBON       220K       5%       1         R399       1-216-049-91       RES,CHIP       100       5%       1/10W <td>2W 1/4W 1/4W 1/10W 1/10W 1/4W</td>	2W 1/4W 1/4W 1/10W 1/10W 1/4W
R391   1-216-073-00   RES,CHIP   10K   5%   1/10W   R547   △ 1-249-385-11   CARBON   2.2   5%   1   1.249-385-11   CARBON   2.2   5%   1   1.249-385-11   CARBON   12K   5%   1.249-385-11   CARBON   10K   5%   1.249-385-12   1.249-385-12   1.249-385-12   1.249-385-12   1.249-385-12   1.249-385-12   1.249-385-12   1.249-385-12   1.249-385-12   1.249-385-12   1.249-385-12   1.249-385-12   1.249-385	1/4W 1/4W 1/4W 1/10W 1/4W 1/4W
R391       1-216-073-00       RES,CHIP (KV-29VL42T/27V42)27V66)       10K       5%       1/10W       R547       △       1-249-385-11       CARBON       2.2       5%       1         R392       1-216-049-91       RES,CHIP 1K       5%       1/10W       R548       1-249-430-11       CARBON       12K       5%       1         R392       1-216-049-91       RES,CHIP 1K       5%       1/10W       R549       1-249-429-11       CARBON       10K       5%       1         R394       1-216-033-00       RES,CHIP 220       5%       1/10W       R551       1-216-061-00       RES,CHIP 3.3K       5%       1         R395       1-216-049-91       RES,CHIP 1K       5%       1/10W       R551       1-249-413-11       CARBON       470       5%       1         R395       1-216-049-91       RES,CHIP 1K       5%       1/10W       R552       1-247-887-00       CARBON       220K       5%       1         R399       1-216-025-91       RES,CHIP 100       5%       1/10W       R555       1-216-033-91       RES,CHIP 150K       5%       1         R400       1-216-081-00       RES,CHIP 22K       5%       1/10W       R556       1-216-081-00       RES,CHIP 22K <td>1/4W 1/4W 1/10W 1/4W 1/4W</td>	1/4W 1/4W 1/10W 1/4W 1/4W
R392   1-216-049-91   RES,CHIP   1K   5%   1/10W   R549   1-249-429-11   CARBON   10K   5%   1/10W   R549   1-249-429-11   CARBON   10K   5%   1/10W   R550   1-216-061-00   RES,CHIP   3.3K   5%   1/10W   R550   1-216-061-00   RES,CHIP   3.3K   5%   1/10W   R551   1-249-413-11   CARBON   470   5%   1/10W   R551   1-249-413-11   CARBON   470   5%   1/10W   R551   1-249-413-11   CARBON   470   5%   1/10W   R553   ∆ 1-260-312-11   CARBON   470   5%   1/10W   R554   1-216-101-00   RES,CHIP   150K   5%   1/10W   R554   1-216-101-00   RES,CHIP   150K   5%   1/10W   R555   1-216-093-91   RES,CHIP   68K   5%   1/10W   R556   1-216-081-00   RES,CHIP   22K   5%   1/10W   R557   1-249-431-11   CARBON   15K   5%   1/10W   R558   1-216-033-00   RES,CHIP   220   5%   1/10W   R558   1-216-065-91   RES,CHIP   4.7K   5%   1/10W   1	1/4W 1/4W 1/10W 1/4W 1/4W
R392       1-216-049-91       RES,CHIP (KV-29VL42T/27V42/27V66)       1/10W       R549       1-249-429-11 (ARBON)       CARBON       10K       5%       1         R394       1-216-033-00       RES,CHIP 220 5% 1/10W (KV-29VL42T/27V42/27V66)       R550 1-216-061-00 RES,CHIP 3.3K 5% 1       1         R395       1-216-049-91       RES,CHIP 1K 5% 1/10W (KV-29VL42T/27V42/27V66)       R551 1-249-413-11 CARBON 47 5% 1       20K 5% 1         R395       1-216-049-91       RES,CHIP 1W 5% 1/10W R553 Δ 1-260-312-11 CARBON 47 5% 1       R553 Δ 1-260-312-11 CARBON 47 5% 1       1         R399       1-216-025-91       RES,CHIP 100 5% 1/10W R555 1-216-093-91 RES,CHIP 68K 5% 1       1       1         R400       1-216-081-00 RES,CHIP 22K 5% 1/10W R556 1-216-081-00 RES,CHIP 22K 5% 1       1       1         R402       1-216-121-91 RES,CHIP 1M 5% 1/10W R557 1-249-431-11 CARBON 15K 5% 1       1         R403       1-216-033-00 RES,CHIP 220 5% 1/10W R558 1-216-065-91 RES,CHIP 4.7K 5% 1	1/4W 1/10W 1/4W 1/4W 1/2W
R394   1-216-033-00   RES,CHIP   220   5%   1/10W   R551   1-249-413-11   CARBON   470   5%   1/10W   R551   1-249-413-11   CARBON   470   5%   1/10W   R551   1-249-413-11   CARBON   470   5%   1/10W   R552   1-247-887-00   CARBON   220K   5%   1/10W   R553   ∆ 1-260-312-11   CARBON   470   5%   1/10W   R554   1-216-101-00   RES,CHIP   150K   5%   1/10W   R554   1-216-101-00   RES,CHIP   150K   5%   1/10W   R555   1-216-093-91   RES,CHIP   68K   5%   1/10W   R556   1-216-081-00   RES,CHIP   22K   5%   1/10W   R556   1-216-081-00   RES,CHIP   22K   5%   1/10W   R556   1-216-081-00   RES,CHIP   22K   5%   1/10W   R557   1-249-431-11   CARBON   15K   5%   1/10W   R558   1-216-033-00   RES,CHIP   220   5%   1/10W   R558   1-216-065-91   RES,CHIP   4.7K   5%   1/10W	1/10W 1/4W 1/4W 1/2W
R394       1-216-033-00       RES,CHIP 220 5% 1/10W (KV-29VL42T/27V42/27V66)       R551       1-249-413-11       CARBON 470 5% 1         R395       1-216-049-91       RES,CHIP 1K 5% 1/10W (KV-29VL42T/27V42/27V66)       R552 1-247-887-00 CARBON 220K 5% 1       5% 1         R395       1-216-049-91       RES,CHIP 1K 5% 1/10W R553 Δ 1-260-312-11 CARBON 47 5% 1       1         R399       1-216-025-91       RES,CHIP 100 5% 1/10W R555 1-216-093-91 RES,CHIP 68K 5% 1       1         R400       1-216-081-00 RES,CHIP 22K 5% 1/10W R556 1-216-081-00 RES,CHIP 22K 5% 1       1         R402       1-216-121-91 RES,CHIP 1M 5% 1/10W R557 1-249-431-11 CARBON 15K 5% 1         R403       1-216-033-00 RES,CHIP 220 5% 1/10W R558 1-216-065-91 RES,CHIP 4.7K 5% 1	1/4W 1/4W 1/2W
R395	1/4W 1/2W
R395	1/4W 1/2W
R395       1-216-049-91       RES,CHIP 1K 5% 1/10W (KV-29VL42T/27V42/27V66)       R552       1-247-887-00 CARBON 220K 5% 1       220K 5% 1         R399       1-216-025-91       RES,CHIP 100 5% 1/10W R555       1-216-101-00 RES,CHIP 150K 5% 1       1         R400       1-216-081-00 RES,CHIP 22K 5% 1/10W (KV-29SL42K/29SL42T/XL42T/29VL42T/27V42)       R556       1-216-081-00 RES,CHIP 22K 5% 1       5% 1         R402       1-216-121-91       RES,CHIP 1M 5% 1/10W R557       R557       1-249-431-11 CARBON 15K 5% 1       1         R403       1-216-033-00       RES,CHIP 220 5% 1/10W R558       1-216-065-91 RES,CHIP 4.7K 5% 1	1/2W
R553	1/2W
R399 1-216-025-91 RES,CHIP 100 5% 1/10W R555 1-216-093-91 RES,CHIP 68K 5% 1 R400 1-216-081-00 RES,CHIP 22K 5% 1/10W R556 1-216-081-00 RES,CHIP 22K 5% 1 (KV-29SL42K/29SL42T/XL42T/29VL42T/27V42) R402 1-216-121-91 RES,CHIP 1M 5% 1/10W R557 1-249-431-11 CARBON 15K 5% 1 R403 1-216-033-00 RES,CHIP 220 5% 1/10W R558 1-216-065-91 RES,CHIP 4.7K 5% 1	
R399 1-216-025-91 RES,CHIP 100 5% 1/10W R555 1-216-093-91 RES,CHIP 68K 5% 1 R400 1-216-081-00 RES,CHIP 22K 5% 1/10W R556 1-216-081-00 RES,CHIP 22K 5% 1 (KV-29SL42K/29SL42T/XL42T/29VL42T/27V42) R402 1-216-121-91 RES,CHIP 1M 5% 1/10W R557 1-249-431-11 CARBON 15K 5% 1 R403 1-216-033-00 RES,CHIP 220 5% 1/10W R558 1-216-065-91 RES,CHIP 4.7K 5% 1	1/10W
R400 1-216-081-00 RES,CHIP 22K 5% 1/10W R556 1-216-081-00 RES,CHIP 22K 5% 1 (KV-29SL42K/29SL42T/XL42T/29VL42T/27V42)  R402 1-216-121-91 RES,CHIP 1M 5% 1/10W R557 1-249-431-11 CARBON 15K 5% 1 R403 1-216-033-00 RES,CHIP 220 5% 1/10W R558 1-216-065-91 RES,CHIP 4.7K 5% 1	1/10W
(KV-29SL42K/29SL42T/XL42T/29VL42T/27V42)       R402     1-216-121-91     RES,CHIP     1M     5%     1/10W     R557     1-249-431-11     CARBON     15K     5%     1       R403     1-216-033-00     RES,CHIP     220     5%     1/10W     R558     1-216-065-91     RES,CHIP     4.7K     5%     1	
R402 1-216-121-91 RES,CHIP 1M 5% 1/10W R557 1-249-431-11 CARBON 15K 5% 1 R403 1-216-033-00 RES,CHIP 220 5% 1/10W R558 1-216-065-91 RES,CHIP 4.7K 5% 1	1/10W
R403 1-216-033-00 RES,CHIP 220 5% 1/10W R558 1-216-065-91 RES,CHIP 4.7K 5% 1	
	1/4W
	1/10W
	1/10W
R561 △ 1-249-377-11 CARBON 0.47 5% 1	1/4W
R407 1-216-295-91 SHORT R562 \( \triangle \triangle 1-260-288-11 \) CARBON 0.47 5% 1	1/2W
(KV-29SL42K/29SL42T/XL42T/29VL42T/27V42)	
R432 1-249-428-11 CARBON 8.2K 5% 1/4W R571 △ 1-216-365-00 METAL 0.47 5% 2	2W
(KV-29SL42K/29SL42T/XL42T/29VL42T/27V42) R572 △ 1-249-429-11 CARBON 10K 5% 1	1/4W
· ·	1/4W
,	1/4W
_	1/4W
18.70 M 12.10 SEC 11 11.10 M 18.70 M 1	,,, ,,,,
R503 △ 1-249-426-11 CARBON 5.6K 5% 1/4W R576 △ 1-249-441-11 CARBON 100K 5% 1	1/4W
	1W
	1/10W
	1/10W
	1/10W
	1/10W
R508 🛆 1-216-449-11 METAL 56 5% 2W	
·	1/10W
<u> </u>	1/10W
	1/10W
	1/10W
R587 1-216-073-00 RES,CHIP 10K 5% 1	1/10W
R521 1-249-411-11 CARBON 330 5% 1/4W	
	2W
	1W
	1/4W
	1/4W
	10W
R526 1-216-081-00 RES,CHIP 22K 5% 1/10W	1011
1/02/0 1-2 10-0/01-100 1/10/01-111	
, and the second	1//\\/
R527 1-216-079-00 RES,CHIP 18K 5% 1/10W R628 1-249-441-11 CARBON 100K 5% 1	1/4W
R527 1-216-079-00 RES,CHIP 18K 5% 1/10W R628 1-249-441-11 CARBON 100K 5% 1 R528 1-216-057-00 RES,CHIP 2.2K 5% 1/10W R629 1-260-324-11 CARBON 470 5% 1	1/4W 1/2W 1/4W

The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

Note:

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REF. NO	. PART NO.	DESCRIPTION		REMAR	RK
R631	1-249-437-11	CARBON	47K	5%	1/4W
R632 /	△ 1-202-933-61	FUSIBLE		10%	1/2W
R633	1-215-479-00	METAL (KV-29SL42K ON	270K LY)	1%	1/4W
R633	1-215-483-00	METAL (KV-29SL42T/XL4	390K 12T/29VI 42T	1% /27\/42/2	1/4W 7V66)
R634	1-249-437-11	CARBON	47K	5%	1/4W
R636	1-249-421-11	CARBON	2.2K	5%	1/4W
R637	1-215-929-11	METAL (KV-29SL42K/29V	100K	5%	3W
R638	1-215-479-00	METAL (KV-29SL42K ON	270K	1%	1/4W
R639	1-216-361-21	METAL	0.22	5%	2W
R640	1-249-415-11	CARBON	680	5%	1/4W
	1-216-387-11	METAL	0.68	5%	3W
R642	1-249-437-11	CARBON	47K	5%	1/4W
R643	1-215-857-11	METAL	10	5%	1W
R645	1-249-429-11	CARBON	10K	5%	1/4W
R646	1-216-485-11	METAL	5.6K	5%	3W
R647	1-249-421-11	CARBON	2.2K	5%	1/4W
R649	1-249-417-11	CARBON	1K	5%	1/4W
R650	1-249-415-11	CARBON	680	5%	1/4W
R651	1-249-419-11	CARBON	1.5K	5%	1/4W
R652	1-247-843-11	CARBON	3.3K	5%	1/4W
	1-215-898-11	METAL	10K	5%	2W
R654	1-249-419-11	CARBON	1.5K	5%	1/4W
R656	1-249-402-11	CARBON (KV-29SL42K)	56	5%	1/4W
R656	1-249-399-11	CARBON	33	5%	1/4W
		(KV-29SL42T/XL4			
R657	1-249-417-11	CARBON	1K	5%	1/4W
R658	1-249-421-11	CARBON	2.2K	5%	1/4W
R659	1-216-362-11	METAL	0.27	5%	2W
R660	1-249-429-11	CARBON	10K	5%	1/4W
R662	1-249-417-11	CARBON	1K	5%	1/4W
R664	1-249-417-11	CARBON	1K	5%	1/4W
R665	1-249-429-11	CARBON	10K	5%	1/4W
R672	1-216-485-11	METAL	5.6K	5%	3W
R673	1-249-421-11	CARBON	2.2K	5%	1/4W
R674	1-247-863-91	CARBON	22K	5%	1/4W
	1-247-003-91	METAL	0.68	5%	3W
R676	1-216-367-11	METAL	5.6K	5% 5%	3W
N0/0	1-210-400-11	IVIETAL	J.0N	J70	344

REF. NO.	PART NO.	DESCRIPTION	REMARK
	<u>SWITCH</u>		
\$001 \$002 \$003 \$004 \$005 \$006 \$007	1-692-431-21 1-692-431-21 1-692-431-21 1-692-431-21 1-692-431-21 1-692-431-21	SWITCH,TACTILE SWITCH,TACTILE SWITCH,TACTILE SWITCH,TACTILE SWITCH,TACTILE	(KV-29SL42K/29SL42T/XL42T) (KV-29SL42K/29SL42T/XL42T) (KV-29SL42K/29SL42T/XL42T) (KV-29SL42K/29SL42T/XL42T) (KV-29SL42K/29SL42T/XL42T) (KV-29SL42K/29SL42T/XL42T) (KV-29SL42K/29SL42T/XL42T)
	<u>SWITCH</u>		
SW501	1-572-707-11	SWITCH,LEVER	
	TRANSFOR	<u>MER</u>	
T501 T502	1-437-210-11 1-431-731-11	TRANSFORMER,H TRANSFORMER,N	IORIZONTAL DRIVE IODULATION
	1-453-268-21 1-433-807-11 1-433-806-11	FBT ASSY,NX-4009 TRANSFORMER,R TRANSFORMER,R	5//X4J4 REGULATOR (KV-29SL42K)

## **THERMISTOR**

THP601 A 1-803-540-11	THERMISTOR (KV-29SL42K ONLY)
THP602 △ 1-809-539-11	THERMISTOR, POSITIVE
	(KV-29SL42T/XL42T/29VL42T/27V42/27V66)

## **TUNER**

TU101 A 8-598-475-00	FSS TUNER BTF-WL411 (KV-29SL42K ONLY)
TU101 A 8-598-477-00	FSS TUNER BTF-WG411
	(KV-29SL42T/XL42T/29VL42T)
TU101 A 8-598-431-00	TUNER,FSS BTF-WA411 (KV-27V42/27V66)

# **CRYSTAL**

X001	1-767-487-11	VIBRATOR, CRYSTAL
X301	1-567-505-11	OSCILLATOR.CRYSTAL

# **RELAY**

RY602 <u>A</u> 1-755-266-11 RELAY,AC POWER RY603 <u>A</u> 1-755-018-11 RELAY





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Note:

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REF. NO.	PART NO.	<u>DESCRIPTION</u>	REMARK
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A-1331-920-A C BOARD, COMPLETE

(KV-29SL42K/42T/29XL42T)

4-382-854-11 SCREW(M3X10),P,SW(+)

## **CAPACITOR**

C1751	1-107-652-11	ELECT	10µF	20%	250V
C1752	1-162-114-00	CERAMIC	0.0047µF		2KV
C1755	1-107-667-11	ELECT	2.2µF	20%	160V

#### **CONNECTOR**

CN1751	* 1-564-509-11	PLUG, CONNECTOR	6P
CN1752	* 1-564-508-11	PLUG, CONNECTOR	5P
CN1753	1-784-281-11	TAB(CONTACT)	
CN1754	1-695-915-11	TAB(CONTACT)	

## **DIODE**

D1754	8-719-901-83	DIODE 1SS83
D1755	8-719-901-83	DIODE 1SS83
D1756	8-719-901-83	DIODE 1SS83
D1758	8-719-302-43	DIODE EL1Z

<u>IC</u>

IC1751 8-759-562-43 IC TDA6108JF/N1B

# **JACK**

14754		4 004 000 44	COCKET ODT	
J1751	$\Lambda$	1-251-688-11	SOCKET.CRT	

|--|

L1751	1-408-613-31	INDUCTOR	68µH

#### RESISTOR

R1756	1-260-099-11	CARBON	1K	5%	1/2W	
R1757	1-260-099-11	CARBON	1K	5%	1/2W	
R1758	1-260-099-11	CARBON	1K	5%	1/2W	
R1759	1-260-087-11	CARBON	100	5%	1/2W	
R1760	1-260-123-11	CARBON	100K	5%	1/2W	
R1761	1-216-373-11	METAL	22	5%	2W	F

REF. NO.	PART NO.	DESCRIPTION		REMA	<u>RK</u>	
R1762 R1763 R1764 R1765 R1770	1-216-375-00 1-247-807-31 1-247-807-31 1-247-807-31 1-260-132-11	METAL CARBON CARBON CARBON CARBON	3.3 100 100 100 560K	5% 5% 5% 5% 5%	2W 1/4W 1/4W 1/4W 1/2W	F



\* A-1331-921-A CV BOARD, COMPLETE

(KV-27V42/66/29VL42T)

4-382-854-11 SCREW (M3X10),P,SW(+)

#### **CAPACITOR**

C944 C945 C946 C949 C950	1-102-129-00 1-102-110-00 1-104-665-11 1-161-830-00 1-126-941-11	CERAMIC CERAMIC ELECT CERAMIC ELECT	0.01µF 220PF 100µF 0.0047µF 470µF	10% 10% 20%	50V 50V 25V 500V 25V
C930	1-120-941-11	ELECT	410µr	20%	237
C951 C952 C953 C954 C955	1-107-645-11 1-104-999-11 1-106-383-00 1-130-471-00 1-107-667-11	ELECT MYLAR MYLAR FILM ELECT	22μF 0.1μF 0.047μF 0.001μF 2.2μF	20% 10% 10% 5% 20%	160V 200V 200V 50V 160V
C956 C957 C958 C1701 C1702	1-130-471-00 1-106-383-00 1-126-941-11 1-107-652-11 1-162-114-00	FILM MYLAR ELECT ELECT CERAMIC	0.001μF 0.047μF 470μF 10μF 0.0047μF	5% 10% 20% 20%	50V 200V 25V 250V 2KV
C1705 C1941 C1948	1-107-667-11 1-126-941-11 1-102-121-00	ELECT ELECT CERAMIC	2.2µF 470µF 0.0022µF	20% 20% 10%	160V 25V 50V

#### **CONNECTOR**

CN942	* 1-564-507-11	PLUG,CONNECTOR 4P
CN1701	* 1-564-509-11	PLUG, CONNECTOR 6P
CN1702	* 1-564-511-11	PLUG, CONNECTOR 8P
CN1703	1-784-281-11	TAB(CONTACT)
CN1704	1-695-915-11	TAB(CONTACT)

## DIODE

D941	8-719-991-33	DIODE 1SS133T-77
D946	8-719-110-88	DIODE RD39ESB2
D947	8-719-110-88	DIODE RD39ESB2
D1704	8-719-901-83	DIODE 1SS83
D1705	8-719-901-83	DIODE 1SS83

100

100

560K

47

3.3

560

18K

470

1K

18K

560

3.3

47

Note:

L1701

Q943

Q944

Q945

Q946

Q947

Q965

Q966

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Note:

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1-247-807-31

1-247-807-31

1-260-132-11

1-260-312-11

1-249-387-11

1-249-414-11

1-249-432-11

1-215-915-11

1-249-417-11

1-249-432-11 CARBON

DESCRIPTION

**CARBON** 

CARBON

CARBON

**CARBON** 

CARBON

CARBON

CARBON

METAL

CARBON

REF. NO. PART NO.

R1714

R1715

R1720

R1941

R1942

R1943

R1944

R1945

R1946

R1947



**REMARK** 

1/4W F

1/4W

1/2W

1/2W

1/4W

1/4W

1/4W F

3W

1/4W

1/4W F

1/4W

1/4W

1/4W

F

F

5%

5%

5%

5%

5%

5%

5%

5%

5%

5%

5%

5%

5%

REF. NO.	PART NO.	DESCRIPTION	REMARK
D1706 D1708	8-719-901-83 8-719-302-43	DIODE 1SS83 DIODE EL1Z	
	<u>IC</u>		
IC1701	8-759-562-43	IC TDA6108JF/N1B	
	<u>JACK</u>		
J1701 △	1-251-688-11	SOCKET, CRT	
	COIL		

68µH

2SC2785-HFE

2SC2785-HFE

2SC2785-HFE

2SA1175-HFE

2SA1837

2SC4793 2SC2785-HFE

R1948	1-249-414-11	CARBON
R1949	1-249-387-11	CARBON
R1950	1-249-401-11	CARBON
F		

- A-1343-654-A E BOARD, COMPLETE
- A-1343-656-A E BOARD, COMPLETE

(KV-29SL42K ONLY) 1-533-223-11 HOLDER,FUSE

4-374-846-11 COVER, CAPACITOR, CAP TYPE

_				_
R	FS	IST	۲N	R

1-408-613-31 INDUCTOR

8-729-017-05 TRANSISTOR

8-729-017-06 TRANSISTOR

TRANSISTOR

**TRANSISTOR** 

TRANSISTOR

TRANSISTOR

TRANSISTOR

**TRANSISTOR** 

8-729-119-78

8-729-119-78

8-729-119-78

8-729-119-78

8-729-119-76

1-247-807-31	CARBON	100	5%	1/4W	
1-249-417-11	CARBON	1K	5%	1/4W	
1-249-421-11	CARBON	2.2K	5%	1/4W	
1-249-417-11	CARBON	1K	5%	1/4W	
1-249-417-11	CARBON	1K	5%	1/4W	
1-249-413-11	CARBON	470	5%	1/4W	
1-249-403-11	CARBON	68	5%	1/4W	
1-247-815-91	CARBON	220	5%	1/4W	
1-249-416-11	CARBON	820	5%	1/4W	
1-247-807-31	CARBON	100	5%	1/4W	
1-249-429-11	CARBON	10K	5%	1/4W	
1-247-807-31	CARBON	100	5%	1/4W	
1-249-403-11	CARBON	68	5%	1/4W	
1-249-397-11	CARBON	22	5%	1/4W	
1-249-401-11	CARBON	47	5%	1/4W	
1-260-099-11	CARBON	1K	5%	1/2W	F
1-260-099-11	CARBON	1K	5%	1/2W	
1-260-099-11	CARBON	1K	5%	1/2W	
1-260-087-11	CARBON	100	5%	1/2W	
1-260-123-11	CARBON	100K	5%	1/2W	
1-216-373-11	METAL	2.2	5%	2W	
1-216-375-00	METAL	3.3	5%	2W	
1-247-807-31	CARBON	100	5%	1/4W	F
	1-249-417-11 1-249-417-11 1-249-417-11 1-249-413-11 1-249-403-11 1-249-403-11 1-249-416-11 1-247-807-31 1-249-429-11 1-249-403-11 1-249-401-11 1-260-099-11 1-260-099-11 1-260-099-11 1-260-099-11 1-260-123-11 1-216-373-11 1-216-375-00	1-249-417-11 CARBON 1-249-421-11 CARBON 1-249-417-11 CARBON 1-249-417-11 CARBON 1-249-403-11 CARBON 1-249-403-11 CARBON 1-249-416-11 CARBON 1-249-416-11 CARBON 1-247-807-31 CARBON 1-249-429-11 CARBON 1-249-403-11 CARBON 1-249-403-11 CARBON 1-249-401-11 CARBON 1-249-401-11 CARBON 1-260-099-11 CARBON 1-260-123-11 CARBON	1-249-417-11 CARBON 1K 1-249-421-11 CARBON 2.2K 1-249-417-11 CARBON 1K 1-249-417-11 CARBON 1K 1-249-413-11 CARBON 1K 1-249-403-11 CARBON 68 1-247-815-91 CARBON 220 1-249-416-11 CARBON 820 1-247-807-31 CARBON 100 1-249-429-11 CARBON 100 1-249-403-11 CARBON 100 1-249-403-11 CARBON 68 1-249-397-11 CARBON 22 1-249-401-11 CARBON 47 1-260-099-11 CARBON 1K 1-260-099-11 CARBON 100 1-260-123-11 CARBON 100 1-216-373-11 METAL 2.2 1-216-375-00 METAL 3.3	1-249-417-11 CARBON 1K 5% 1-249-421-11 CARBON 2.2K 5% 1-249-417-11 CARBON 1K 5% 1-249-417-11 CARBON 1K 5% 1-249-417-11 CARBON 1K 5% 1-249-413-11 CARBON 470 5% 1-249-403-11 CARBON 68 5% 1-247-815-91 CARBON 220 5% 1-249-416-11 CARBON 820 5% 1-247-807-31 CARBON 100 5% 1-249-429-11 CARBON 100 5% 1-249-403-11 CARBON 100 5% 1-249-403-11 CARBON 100 5% 1-249-403-11 CARBON 100 5% 1-249-403-11 CARBON 100 5% 1-249-401-11 CARBON 47 5% 1-260-099-11 CARBON 1K 5% 1-260-123-11 CARBON 100 5% 1-216-373-11 METAL 2.2 5% 1-216-375-00 METAL 3.3 5%	1-249-417-11 CARBON 1K 5% 1/4W 1-249-421-11 CARBON 2.2K 5% 1/4W 1-249-417-11 CARBON 1K 5% 1/4W 1-249-417-11 CARBON 1K 5% 1/4W 1-249-413-11 CARBON 470 5% 1/4W 1-249-403-11 CARBON 68 5% 1/4W 1-249-416-11 CARBON 820 5% 1/4W 1-249-416-11 CARBON 820 5% 1/4W 1-249-407-31 CARBON 100 5% 1/4W 1-249-403-11 CARBON 68 5% 1/4W 1-249-403-11 CARBON 47 5% 1/4W 1-249-401-11 CARBON 47 5% 1/4W 1-260-099-11 CARBON 1K 5% 1/2W 1-260-123-11 CARBON 100 5% 1/2W 1-260-123-11 CARBON 100 5% 1/2W 1-260-123-11 CARBON 100 5% 1/2W 1-216-373-11 METAL 2.2 5% 2W 1-216-373-11 METAL 2.2 5% 2W 1-216-375-00 METAL 3.3 5% 2W

## **CAPACITOR**

C5002 C5003 C5004 C5006	1-107-679-91 1-136-601-11 1-130-471-00 1-130-471-00	ELECT FILM MYLAR MYLAR	10μF 0.01μF 0.001μF 0.001μF	20% 10% 5% 5%	450V 630V 50V 50V
C5007	1-130-467-00	MYLAR	470PF	5%	50V
C5008	1-130-471-00	MYLAR	0.001µF	5%	50V
C5009	1-126-965-11	ELECT	22µF	20%	50V
C5010	1-115-804-91	ELECT	120µF	20%	35V
C5020 △	1-113-941-11	CERAMIC	0.0047µF	20%	125V
C5021 △	1-113-924-11	CERAMIC (KV-29SL42K ON	0.0047µF LY)	20%	250V
C5050 △	1-136-311-11	FILM	0.47µF	20%	125V
C5150 △	1-136-311-11	FILM (ALL EXCEPT KV	0.47µF -29SL42K)	20%	125V
C5643 C5644	1-113-924-11 1-113-924-11	CERAMIC CERAMIC	0.0047μF 0.0047μF	20% 20%	250V 250V

#### CONNECTOR

CN5000	*	1-580-843-11	PIN,CONNECTOR(POWER)
CN5001	×	1-564-506-11	PLUG,CONNECTOR 3P
CN5002	*	1-580-843-11	PIN,CONNECTOR(POWER)
CN5003	*	1-508-786-00	PIN,CONNECTOR(5MM PITCH) 2P



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REF. NO.	PART NO.	DESCRIPTION	REMARK
	DIODE		
D5003	8-719-948-45	DIODE ERA22-08	
D5004	8-719-991-33	DIODE 1SS133T-77	
D5005	8-719-991-33	DIODE 1SS133T-77	
D5006	8-719-109-93	DIODE RD6.2ESB2	
D5007	8-719-510-48	DIODE D1N20R	
D5008	8-719-063-70	DIODE D1NL20U	
D5631	8-719-911-55	DIODE U05G	
D5632	8-719-911-55	DIODE U05G	

# **FUSE**

F5050 △	1-576-193-11	FUSE 6.3A/125V
F5050 △	1-532-506-51	FUSE 6.3A/250V (KV-29SL42K ONLY)

# **TRANSISTOR**

Q5001	8-729-044-30	TRANSISTOR 2SK2845-LB102
Q5002	8-729-119-78	TRANSISTOR 2SC2785-HFE

## **RESISTOR**

R5001	1-249-389-11	CARBON	4.7	5%	1/4W	
R5002	1-215-485-00	METAL	470K	1%	1/4W	
R5003	1-240-205-91	CARBON	22M	5%	1/2W	F
R5007	1-249-421-11	CARBON	2.2K	5%	1/4W	
R5008	1-249-429-11	CARBON	10K	5%	1/4W	
R5009	1-249-437-11	CARBON	47K	5%	1/4W	
R5010	1-249-415-11	CARBON	680	5%	1/4W	
R5011	1-260-302-51	CARBON	6.8	5%	1/2W	
R5012	1-249-417-11	CARBON	1K	5%	1/4W	
R5013	1-249-415-11	CARBON	680	5%	1/4W	
R5050	1-219-512-11	CARBON	2.2M	5%	1/2W	
R5350 △	1-219-513-11	CARBON	4.7M	5%	1/2W	
R5350 △	1-247-289-00	CARBON	8.2M	5%	1W	
		(KV-29SL42K ON	ILY)			

## **TRANSFORMER**

T5001 <u></u> 1-431-852-11	TRANSFORMER,CONVERTER(SRT)
T5050 🛆 1-426-717-11	TRANSFORMER,LINE FILTER (LFT)
T5050 🛆 1-424-220-11	TRANSFORMER,LINE FILTER (LFT)
	(KV-29SL42K ONLY)

# **THERMISTOR**

TH506 1-803-586-11 THERMISTOR

REF. NO.	PART NO.	DESCRIPTION	<u>REMARK</u>			
	VARISTOR					
VDR505 VDR505	1-803-585-11 1-803-587-11	VARISTOR VARISTOR (KV-29SL42K ONL	Y)			



\* A-1372-614-A HV BOARD, COMPLETE (KV-27V42/66/29VL42T)

# **CAPACITOR**

C1407	1-137-194-91	FILM	0.47µF	5%	50V
C1408	1-136-287-11	FILM	0.0047µF	5%	50V
C1409	1-137-194-81	FILM	0.47µF	5%	50V
C1410	1-126-964-11	ELECT	10µF	20%	50V
C1411	1-126-964-11	ELECT	10µF	20%	50V
C1412	1-126-964-11	ELECT	10μF	20%	50V
C1413	1-126-964-11	ELECT	10μF	20%	50V
C1415	1-126-968-11	ELECT	100μF	20%	50V
C1416	1-106-375-12	MYLAR	0.022μF	20%	200V
C1417	1-137-414-11	FILM	0.0047μF	10%	100V
C1418	1-102-114-00	CERAMIC	470PF	10%	50V
C1419	1-130-495-00	FILM	0.1μF	5%	50V
C1420	1-137-371-11	FILM	0.015μF	5%	50V
C1421	1-102-121-00	CERAMIC	0.0022μF	10%	50V
C1422	1-137-414-11	FILM	0.0047μF	10%	100V
C1423	1-137-194-91	FILM	0.47µF	5%	50V
C1424	1-130-495-00	FILM	0.1µF	5%	50V
C1425	1-137-370-11	FILM	0.01µF	5%	50V
C1426	1-130-495-00	FILM	0.1µF	5%	50V
C1427	1-137-370-11	FILM	0.01µF	5%	50V
C1428	1-130-495-00	FILM	0.1μF	5%	50V
C1429	1-137-370-11	FILM	0.01μF	5%	50V
C1430	1-126-964-11	ELECT	10μF	20%	50V
C1431	1-136-287-11	FILM	0.0047μF	5%	50V
C1432	1-126-964-11	ELECT	10μF	20%	50V
C1433	1-106-355-12	MYLAR	0.0033µF	10%	100V
C1434	1-106-379-12	MYLAR	0.033µF	10%	100V
C1435	1-126-964-11	ELECT	10µF	20%	50V
C1436	1-126-964-11	ELECT	10µF	20%	50V
C1437	1-126-964-11	ELECT	10µF	20%	50V
C1438	1-106-355-12	MYLAR	0.0033µF	10%	100V
C1439	1-106-379-12	MYLAR	0.033µF	10%	100V
C1440	1-126-964-11	ELECT	10µF	20%	50V
C1443	1-126-964-11	ELECT	10µF	20%	50V
C2068	1-104-665-11	ELECT	100µF	20%	25V
C2234	1-126-960-11	ELECT	1µF	20%	50V

R1408

R1409

R1410

R1411

R1412

R1413

R1414

R1415

R1416

R1417

R1419

R1420

R1421

R1422

R1423

1-215-469-00

1-249-417-11

1-215-461-00

1-249-429-11

1-249-427-11

1-249-427-11

1-249-429-11

1-249-429-11

1-249-429-11

1-249-429-11

1-249-441-11

1-249-429-11

1-249-441-11

1-249-429-11

1-249-441-11

METAL

METAL

CARBON

CARBON

CARBON

**CARBON** 

**CARBON** 

**CARBON** 

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**CARBON** 

**CARBON** 

CARBON

100K

1K

47K

10K

6.8K

6.8K

10K

10K

10K

10K

100K

10K

100K

10K

100K

1%

5%

1%

5%

5%

5%

5%

5%

5%

5%

5%

5%

5%

5%

5%

1/4W

The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

Note:





						•					
REF. NO.	PART NO.	DESCRIPTION	<u>l</u>	REMA	<u>rk</u>	REF. NO.	PART NO.	DESCRIPTION		REMAI	RK
C2235	1-126-960-11	ELECT	1µF	20%	50V	R1424	1-249-429-11	CARBON	10K	5%	1/4W
C2236	1-106-343-00	MYLAR	0.001µF	10%	200V	R1425	1-249-429-11	CARBON	10K	5%	1/4W
						R1426	1-249-429-11	CARBON	10K	5%	1/4V
						R1427	1-249-429-11	CARBON	10K	5%	1/4V
	CONNECTO	<u>R</u>				R1428	1-249-429-11	CARBON	10K	5%	1/4W
CN1405 *	1-564-510-11	PLUG,CONNEC	CTOR	7P		R1429	1-249-429-11	CARBON	10K	5%	1/4W
CN1406 *	1-564-506-11	PLUG,CONNEC	CTOR	3P		R1430	1-215-461-00	METAL	47K	1%	1/4W
	1-564-506-11	PLUG,CONNEC		3P		R1431	1-249-429-11	CARBON	10K	5%	1/4W
	1-564-508-11	PLUG,CONNEC		5P		R1432	1-249-429-11	CARBON	10K	5%	1/4W
CN2202 *	1-564-510-11	PLUG,CONNEC	CTOR	7P		R1433	1-249-429-11	CARBON	10K	5%	1/4W
						R1434	1-215-445-00	METAL	10K	1%	1/4W
	DIODE					R1435	1-249-431-11	CARBON	15K	5%	1/4W
						R1440	1-249-429-11	CARBON	10K	5%	1/4W
D2001	8-719-110-17	DIODE RD10ES	SB2			R1441	1-249-429-11	CARBON	10K	5%	1/4W
D2006 D2235	1-810-039-11 8-719-110-17	LED UNIT DIODE RD10ES	SB2			R1442	1-249-429-11	CARBON	10K	5%	1/4W
D2236	8-719-110-17	DIODE RD10ES				R1443	1-249-429-11	CARBON	10K	5%	1/4W
						R2236	1-247-895-91	CARBON	470K	5%	1/4W
	<u>IC</u>					R2238	1-247-895-91	CARBON	470K	5%	1/4W
	<u>IC</u>						7				
IC1403	8-759-496-03	IC NJM2178L									
IC1404	8-759-496-02	IC NJM2150D				<b>             </b>					
C2003	8-742-014-11	HYB IC SBX19	81-51			-	_				
						*	A-1380-608-A	K BOARD, CON			
	<u>JACK</u>						4-382-854-11	(KV-27V66 ONL) SCREW(M3X10	,		
J2231	1-691-110-11	JACK,PIN 3P									
							CAPACITOR	<u>R</u>			
	RESISTOR					C1001	1-126-968-11	ELECT	100µF	20%	50V
R1403	1-215-437-00	METAL	4.7K	1%	1/4W	C1002	1-104-664-11	ELECT	47µF	20%	25V
R1403	1-249-419-11	CARBON	4.7K 1.5K	1% 5%	1/4VV 1/4W	C1003	1-126-964-11	ELECT	10μF	20%	50V
R1404 R1405	1-249-419-11	CARBON	1.5K 3.9K	5% 5%	1/4VV 1/4W	C1004	1-126-934-11	ELECT	220µF	20%	16V
R1406	1-249-424-11	CARBON	3.9K 47K	5% 5%	1/4VV 1/4W	C1006	1-137-368-11	FILM	0.0047µF	5%	50V
			47K 33K	5% 5%		C1007	1-126-960-11	ELECT	1μF	20%	50V
R1407	1-249-435-11	CARBON	son	ე%	1/4W						

	CAPACITOR				
C1001 C1002 C1003 C1004 C1006 C1007	1-126-968-11 1-104-664-11 1-126-964-11 1-126-934-11 1-137-368-11 1-126-960-11	ELECT ELECT ELECT FILM ELECT	100μF 47μF 10μF 220μF 0.0047μF 1μF	20% 20% 20% 20% 5% 20%	50V 25V 50V 16V 50V 50V
C1401 C1402 C1403 C1404 C1405 C1406 C1450 C1451 C1452 C1453	1-126-957-11 1-126-943-11 1-126-943-11 1-126-382-11 1-126-382-11 1-136-171-00 1-137-367-11 1-137-367-11	ELECT ELECT ELECT ELECT ELECT FILM FILM FILM	0.22µF 0.22µF 2200µF 2200µF 100µF 100µF 0.33µF 0.0033µF 0.0033µF	20% 20% 20% 20% 20% 20% 5% 5% 5%	50V 50V 25V 25V 16V 16V 50V 50V 50V 50V
0111000	CONNECTO 1-564-507-11 1-564-511-11 1-564-509-11	R PLUG,CONNECT PLUG,CONNECT PLUG,CONNECT	OR	4P 8P 6P	





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Note:

								•			
REF. NO	. PART NO.	DESCRIPTION		REMA	<u>ARK</u>	REF. NO.	PART NO.	DESCRIPTIO	<u>N</u>	REMA	<u>RK</u>
CN1401	* 1-564-507-11 * 1-564-506-11 * 1-564-510-11	PLUG,CONNEC PLUG,CONNEC PLUG,CONNEC	TOR	4P 3P 7P		R1437 R1450 R1451 R1452	1-247-863-91 1-249-422-11 1-249-422-11 1-249-429-11	CARBON CARBON CARBON CARBON	22K 2.7K 2.7K 10K	5% 5% 5%	1/4W 1/4W 1/4W 1/4W
	<u>IC</u>					R1453	1-249-429-11	CARBON	10K	5%	1/4W
IC1400 IC1401	8-759-498-09 8-759-498-09	IC TDA1519AQU					<u>TUNER</u>				
101101	0 100 100 00	10 15/11010/1QC	,			TU1002 <u></u>	8-598-430-00	FSS TUNER	BTF-FA401		
	COIL										
L1001 L1002	1-408-421-00 1-410-470-11	INDUCTOR INDUCTOR	100μH 10μH				A-1195-154-A	P BOARD CO			
	<u>IC LINK</u>							(IXV-27 V00 OI	NLI)		
PS1400 PS1401	1-532-984-11 1-532-984-11	LINK,IC LINK,IC	2A/90V 2A/90V				CAPACITOR	<u>R</u>			
	TRANSISTO	<u>)R</u>				C3301 C3302	1-163-031-11 1-163-031-11	CERAMIC CERAMIC	0.01μF 0.01μF		50V 50V
Q1001	8-729-119-78	TRANSISTOR	2SC2785-			C3303 C3304	1-104-664-11 1-163-031-11	ELECT CERAMIC	47μF 0.01μF	20%	16V 50V
Q1002 Q1003	8-729-119-76 8-729-119-76	TRANSISTOR TRANSISTOR	2SA1175-I 2SA1175-I			C3305	1-163-135-00	CERAMIC	560PF	5%	50V
Q1004 Q1006	8-729-119-76 8-729-119-76	TRANSISTOR TRANSISTOR	2SA1175-I 2SA1175-I			C3306	1-163-038-91	CERAMIC	0.1µF		25V
Q1400	8-729-119-78	TRANSISTOR	2SC2785-			C3307 C3308	1-163-038-91 1-164-222-11	CERAMIC CERAMIC	0.1μF 0.22μF		25V 25V
						C3309 C3310	1-163-034-00 1-164-222-11	CERAMIC CERAMIC	0.033μF 0.22μF		50V 25V
	RESISTOR										
R1001	1-247-807-31	CARBON	100	5%	1/4W	C3311 C3314	1-163-233-11 1-163-031-11	CERAMIC CERAMIC	18PF 0.01µF	5%	50V 50V
R1002	1-247-807-31	CARBON	100	5%	1/4W	C3315	1-163-031-11	CERAMIC	0.01µF		50V
R1003	1-249-434-11 1-249-436-11	CARBON CARBON	27K	5%	1/4W	C3316	1-163-133-00	CERAMIC	470PF	5%	50V
R1004 R1006	1-249-419-11	CARBON	39K 1.5K	5% 5%	1/4W 1/4W	C3317	1-163-133-00	CERAMIC	470PF	5%	50V
R1007	1-247-863-91	CARBON	22K	5%	1/4W	C3323	1-104-664-11	ELECT	47µF	20%	16V
R1008	1-247-863-91	CARBON	22K	5%	1/4W	C3324 C3325	1-163-031-11 1-163-031-11	CERAMIC CERAMIC	0.01µF 0.01µF		50V 50V
R1009	1-247-863-91	CARBON	22K	5%	1/4W	C3326	1-103-031-11	ELECT	0.01μF 47μF	20%	16V
R1010	1-247-863-91	CARBON	22K	5%	1/4W	C3327	1-104-664-11	ELECT	47μF	20%	16V
R1011	1-249-414-11	CARBON	560	5%	1/4W				·		
R1012	1-249-414-11	CARBON	560	5%	1/4W	C3328 C3330	1-104-664-11	ELECT ELECT	47µF	20%	16V
R1013	1-247-807-31	CARBON	100	5%	1/4W	C3334	1-126-964-11 1-164-005-11	CERAMIC	10μF 0.47μF	20%	50V 25V
R1016	1-247-863-91	CARBON	22K	5%	1/4W	C3335	1-163-009-11	CERAMIC	0.47μΓ 0.001μF	10%	50V
R1017	1-247-863-91	CARBON	22K	5%	1/4W	C3336	1-163-031-11	CERAMIC	0.01μF	.070	50V
R1401	1-249-429-11	CARBON	10K	5%	1/4W	C3339	1-163-005-11	CERAMIC	470PF	10%	50V
R1402	1-249-437-11	CARBON	47K	5%	1/4W						
R1433	1-249-421-11	CARBON	2.2K	5%	1/4W		CONNECTO	R			
R1434	1-249-429-11	CARBON	10K	5%	1/4W						
R1435	1-249-429-11	CARBON	10K	5%	1/4W	CN3301	* 1-691-632-21	CONNECTOR	,BOARD TO B	OARD 15	)
R1436	1-249-421-11	CARBON	2.2K	5%	1/4W						

The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

Note:



REF. NO.	PART NO.	DESCRIPTION		REMARK		REF. NO.	PART NO.	DESCRIPTION		REMARK		
	DIODE					R3342	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	
	DIODE					R3343	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	
D3301	8-719-404-50	DIODE MA111-T	Χ			R3344	1-216-073-00	RES,CHIP	10K	5%	1/10W	
D3304	8-719-422-12	DIODE MA8039				R3345	1-216-073-00		10K	5%	1/10W	
						R3346	1-216-295-91	SHORT	1010	370	1/1011	
						1,00,10	1 210 200 01	O TOTAL				
	<u>IC</u>					R3347	1-216-049-91	RES,CHIP	1K	5%	1/10W	
IC3301	8-759-575-99	IC M65669FP-D	60S			R3348	1-216-049-91	RES,CHIP	1K	5%	1/10W	
	0.000.00					R3349	1-215-857-11	METAL	10	5%	1W	
						R3351	1-216-041-00	RES,CHIP	470	5%	1/10W	
	COIL					R3352	1-216-295-91	SHORT				
L3301	1-410-682-31	INDUCTOR	470µH			R3357	1-216-041-00	RES,CHIP	470	5%	1/10W	
L3302	1-414-267-11	INDUCTOR	470μΠ 10μΗ			R3358	1-216-689-11	RES,CHIP	39K	5%	1/10W	
L3303	1-414-267-11	INDUCTOR	10μΠ 10μΗ			R3359	1-216-113-00	RES,CHIP	470K	5%	1/10W	
L3303	1-414-207-11	INDUCTOR	ιυμιι			R3360	1-216-051-00		1.2K	5%	1/10W	
						R3361	1-216-045-00	RES,CHIP	1.5K	5%	1/10W	
	TRANSISTO	R										
	INANOIOTO	<u> </u>				R3365	1-216-073-00		10K	5%	1/10W	
Q3304	8-729-216-22	TRANSISTOR	2SA1162-	-		R3366	1-216-049-91	RES,CHIP	1K	5%	1/10W	
Q3305	8-729-216-22	TRANSISTOR	2SA1162-	G		R3367	1-216-073-00	-,-	10K	5%	1/10W	
Q3306	8-729-216-22	TRANSISTOR	2SA1162-	G		R3368	1-216-049-91	RES,CHIP	1K	5%	1/10W	
Q3309	8-729-422-27	TRANSISTOR	2SD601A	-Q								
Q3310	8-729-422-27	TRANSISTOR	2SD601A	-Q								
Q3311	8-729-111-55	TRANSISTOR	2SD1312-	K			<b>CRYSTAL</b>					
Q3312	8-729-216-22	TRANSISTOR	2SA1162-	G								
Q3313	8-729-422-27	TRANSISTOR	2SD601A	-Q		X3301	1-781-377-11	OSCILLATOR	,CRYSTAL			
Q3314	8-729-422-27	TRANSISTOR	2SD601A	·Q								
	RESISTOR											
R3301	1-216-057-00	RES,CHIP	2.2K	5%	1/10W							
R3302	1-216-121-91	RES,CHIP	1M	5%	1/10W							
R3303	1-216-057-00	RES,CHIP	2.2K	5%	1/10W							
R3304	1-216-133-00	RES,CHIP	820K	5%	1/10W							
R3305	1-216-037-00	RES,CHIP	330	5%	1/10W							
R3308	1-216-085-00		33K	5%	1/10W							
R3309	1-216-025-91	RES,CHIP	100	5%	1/10W							
R3310	1-216-025-91	RES,CHIP	100	5%	1/10W							
Doore	4 040 007 00	DEO OLUB	000	<b>5</b> 0/	4/4004/							
R3311	1-216-037-00	RES,CHIP	330	5%	1/10W							
R3312	1-216-043-91	RES,CHIP	680	5%	1/10W							
R3313	1-216-035-00	RES,CHIP	330	5%	1/10W							
R3316	1-216-295-91	SHORT										
R3317	1-216-295-91	SHORT										
R3318	1-216-061-00	RES,CHIP	3.3K	5%	1/10W							
R3319	1-216-295-91	SHORT										
R3328	1-216-295-91	SHORT										
R3329	1-216-033-00	RES,CHIP	220	5%	1/10W							
R3333	1-216-049-91	RES,CHIP	1K	5%	1/10W							
R3334	1-216-049-91	RES,CHIP	1K	5%	1/10W							
R3335	1-216-049-91	RES,CHIP	1K	5%	1/10W							
R3336	1-216-295-91	SHORT	Ш	J /0	1/1044							
R3338	1-216-295-91	SHORT										
R3340	1-216-295-91	SHORT										

The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque  $\triangle$  sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

REF. NO. PART NO. DESCRIPTION REMARK REF. NO. PART NO. DESCRIPTION REMARK

## PACKAGING AND ACCESSORIES

4-041-255-01	BAG,PROTECTION
4-065-733-02	CARTON,INDIVIDUAL
	(KV-27V66CND/27V42/27V66/29VL42T)
4-064-065-01	CARTON,INDIVIDUAL
	(KV-29XL42T/29SL42K/29SL42T)
4-064-071-01	CUSHION ASSY, LOWER
	(KV-29XL42T/29SL42T/29SL42K)
4-064-069-02	CUSHION ASSY, UPPER
	(KV-29XL42T/29SL42K/29SL42T)
4-054-062-02	CUSHION(LOWER)(ASSY)
	(KV-27V66 CND/27V42/29VL42T/27V66)
4-054-059-04	CUSHION(UPPER)(ASSY)
	(KV-27V66/27V42/27V66CND/29VL42T)
1-475-069-21	REMOTE COMMANDER, (RM-Y149A) (KV-29SL42K)
1-475-801-11	REMOTE COMMANDER, (RM-Y165)
	(KV-27V42/29VL42T/29SL42T/29XL42T)
1-475-802-11	REMOTE COMMANDER, (RM-Y167)
	(KV-27V66)
3-866-074-21	MANUAL,INSTRUCTION (KV-27V66 US/27V42)
3-861-907-21	MANUAL,INSTRUCTION (KV-27V66 CND)
3-861-907-31	MANUAL, INSTRUCTION (KV-27V66 CND)
3-866-935-61	MANUAL,INSTRUCTION (KV-29SL42K)
3-866-524-71	MANUAL,INSTRUCTION
	(KV-29VL42T/29XL42T/29SL42T)
4-978-977-01	BATTERY COVER, REMOTE
8-598-414-20	CHANGER, ANTENNA AS-2F (KV-27V66 ONLY)